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INVESTIGATIONS

MID-PACIFIC MAGAZINE

January-March, 1935

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The Sepik River of New Guinea

From the Journal of GENERAL C. McNICOLL
Administrator of New Guinea

THE SEPIK, one of the four chief rivers of New Guinea, is open to steam vessels for approximately 200 miles from its mouth. The Fly flows in a southwesterly direction, emptying into the Gulf of Papua, and is navigable for almost 600 miles. The British section of New Guinea is under the jurisdiction of the governor-general of Australia, part of it being a mandate from the League of Nations. The following account of the Administrator's tour was given to the *Rabaul Times:*

The next day, Sunday, November 11th, 1934, found us back at Wewak which we had left six days before. It was now necessary to time our departure to ensure arrival at the mouth of the Sepik soon after daylight and at Angoram about dark. The afternoon hours were occupied in shipping all necessary stores for the long river trip. At 7 o'clock we dined with Mr. and Mrs. Ifould at Boram.

Mrs. Ifould's pets were unusual and most interesting. A tree-climbing kangaroo, young but already becoming troublesome, if not vicious. Very similar in build to one of Australian variety, with more prehensile fore-claws, and a longer tail. Its desire for, and power to absorb, beer was most reprehensible in one so young. Then there was the *kapul,* the New Guinea opossum. Larger than the Australian type; red-brown fur, with wide band of almost black across the hind quarters. A gentle animal, it seemed almost blind, the electric light being blamed. Then there were two baby *muruks* (cassowary), striped like zebras, markings which they lose as they grow.

It was after eight when we left these hospitable hosts and their pets, and in half an hour the *Thetis* was pounding along against a fair southeaster towards the Mouth. During the night a strong land breeze gave us a rough hour or so but at daylight quiet had come again and we approached the Sepik under ideal conditions.

The sea was already a strong yellow color, although we were three hours from the actual entrance. The natives in the Western Islands (Admiralty Group) about 150 miles away get all their timber from the Sepik, washed up on their coasts. The river at its mouth is probably 500 yards wide, very deep, and flowing at between two and three knots. When this current encounters a strong sea there is apt to be trouble, but we were fortunate. Not so ten days later when we left the river. But of that, more later.

Monday, November 12, was the first of the six days steaming up the "River of Death." At the first village, Kopar, the river is a quarter of a mile wide, and it seems hardly any narrower 350 miles

up stream. It is very deep. At Ambunti, 240 miles up, the depth is over 50 feet. The strong current carries a continuous mass of debris—huge logs and trees, *pit-pit* (native sugar cane), floating islands of grass—and these form rafts on which rest the large white osprey, the smaller blue crane, and other smaller waders, while in the evening flying foxes dip to the surface for their drink, and hornbills, fish hawks, pigeons, white cockatoos and hrags are seen in numbers. *Puk-puks* (crocodiles) are plentiful. When the river is low they lie in the sun on the mud banks. After heavy rains their basking is done inside the *pit-pit* protection, and only now and then can one get a glimpse. At some of the bends the whirlpool is strong enough to take charge of even a large vessel and steering becomes difficult. At times a look-out is stationed in the bow, signalling with unconscious grace to the man at the wheel, so that we may avoid the floating timbers.

Forty miles up stream we passed Marienberg, a Mission station, and at 8 o'clock (the last two hours at half speed in the moonlight), we reached the Government station at Angoram—E. C. McDonald, once of Geelong and Kyle, is stationed here. We slept ashore under nets, and in alleged mosquito-proof rooms. The police boys and other natives all have their nets and even the dogs are protected. It is comforting to get inside successfully and to lie in bed listening to the orchestra clamoring at the walls.

For the next three days we plugged steadily up stream, past many villages, Magen, Moim, Tambunum, Timbunku, Angerman, Mindinbit, Yentjan, Ambugwi, Marui, Atatib, Malu, being the most important. Three big rivers came in on our left hand (the right bank) the little Ramu, the Yuat, the Karawari, each of which is navigable by motor launch for hundreds of miles. At the end of the fourth day we arrived at Ambunti, which competes with Vanimo for the distinction of being the most remote station in the Territory. Geographically, and from the point of view of communications, it certainly wins, but it is saved by the fact that there are two men stationed there, the Patrol Officer, Hickey, and the Medical Assistant, Squires. The station is finely placed with a substantial hill, 1200 feet, behind it, the first high ground we had seen for days. A herd of goats supplies milk, and incidentally provided the *Thetis* with fresh meat for a couple of days.

At Ambunti we slept ashore again. On the other nights we tied up, or anchored, if possible close to a native village, so that as many as possible of the natives on board could go ashore and erect their nets in comfort among their friends. On board, while our boys were fixing camp stretchers and nets, we took the gramophone up forward and defeated the mosquitoes by fox-trotting around the deck, assisting the rhythm with much slapping of arms and thighs, and wild swishing of handkerchiefs.

The "controlled area" ceases shortly after leaving Ambunti. For two days we steamed upstream, until opposite the village of Wogamush, where we anchored in the early afternoon. Our police boys, armed, were stationed on top of the deck house. The natives, with spears, bows and arrows in every canoe, came warily at first not closer than spear's throw. They know the rifle, but consider its range to be no more than that of a spear. When we made peaceful signs, put the rifles aside, and beckoned them they came gradually closer, and after the first canoe reached us and began to trade, we were soon surrounded.

We had no common talk, not even a word of pidgin. They brought yams and taro to trade, and let us know, by finger stuck in the mouth corner, that they wanted fishhooks. With these we purchased a week's supply of native foods, as well as some of their handiwork. For the most part they were stark naked, though several had a loin string and a "sporan." Large shell and bone ornaments hung from their noses and ears, and faces were dyed with various colors of make-up. They chew betel nut and smoke their native-grown

For the most part they were stark naked . . . faces dyed with various colors . . . we had no common talk, not even a word of pidgin . . . they brought yams and taro to trade . . . would not accept cigarettes . . . but for knives and fishhooks would have sold us anything.

tobacco (unlike the Mount Hagen people, who do neither), but they would not accept from us either cigarettes or the black trade stick tobacco, which is smoked by the natives everywhere else. But for fishhooks and knives they would have sold us anything.

We were now about 350 miles from the river. Another day would have brought us to the junction of the Yellow River, but it was necessary to get back to Madang for the "Macdhui," so we reluctantly turned down-stream. The pace of the current may be gauged by the fact that the *Thetis* took 16 hours to steam up from Ambunti to Wogamush, and only seven to return.

On the way down-stream many villages were visited. At Malu, the men were all dressed up for a Sing-sing, and we were shown through the House Tambaran—the home of their tribal secrets. There were large and hideous dance-masks, which when worn, stand about 8 feet high; rattles made from large nuts; bamboo flutes varying from six to nine feet long, giving a low mellow note. Movements of their fingers at the mouthpiece make the different notes—about three per flute. There were eight garamuts (large drums made from logs about three feet in diameter). The construction of the house contains much symbolism and many secrets. The Marys are not allowed near. There were many men who asked to be allowed to go and work for white men; but recruiting is not permitted in this area at present.

A very interesting feature of the return journey was the excursions away from the river, along canals to big lakes and lagoons, on whose banks were villages very rarely visited. In the vicinity of Eibom is good clay. The village industry is pottery, with which they supply a great part of the river. We obtained some very good examples—from small frying pots that could be used over the little fire on a canoe, to sago-storage jars capable of holding a cwt.

Going farther on through canals, we

encountered a place where the whole passage was blocked with jungle grass. In no time canoes began to arrive. We were in the pinnace *Osprey,* having left the *Thetis* in the river. Overboard went the Kanakas, slashing at the tangle with long knives, hauling at the rubbish under water, pushing and straining at the pinnace, until foot by foot we were in open water again. When we returned an hour or so later, they had so cleared and widened the blockage that we were able to steam through, stopping only once to clear the propeller.

The Cambri Lakes, into which this canal at long last opened, carried acres and acres of water lilies in bloom—white, pink and purple—on the wide circular green leaves were numbers of pure white ospreys and dark blue cranes, so quiet that they stood and stared until the pinnace was close upon them. The piles on which the village houses are built were higher than usual. In flood times the canoes come right to the doors.

It was now past 2 o'clock. We had left the *Thetis* at eight. The pinnace was without food. On reaching Eibom again we sent some villagers up the palms for coconuts, food and drink, which kept us going till we reached the river again at nightfall. What a difference in the point of view. Coming from the *Montoro,* the *Thetis* seemed a ridiculous little cockle-shell in which to put to sea. Returning from a day in the pinnace, she was a big ship, with room to move about in comparative comfort, and the facilities to provide a welcome (if tinned) meal.

Notable Pan-Pacific Conferences 1920 to 1934 Inclusive

Hawaii, Crossroads of the Pacific, Natural Meeting Place

First Pan-Pacific Science Conference—August, 1920, Honolulu. Second, third, fourth in 1923-26-29, in Australia, Japan, and Java respectively under auspices of a science body organized at the first meeting in 1920. The fifth was held in Canada from June 1-14, 1933.

First Pan-Pacific Education Conference—August, 1921, Honolulu. Second in San Francisco, July, 1923, under auspices of the National Education Association, with a section arranged by the Pan-Pacific Union with delegates from China, Japan, etc. At that time was organized the World Federation of Education Associations whose sectional meeting was held in Honolulu—July 25-30, 1932—Oren E. Long, General Secretary, Hawaii Committee.

First official Pan-Pacific Educational Conference, called by President Coolidge, Honolulu, April, 1927. The Pan-Pacific Union was asked to help in arranging the program and in interesting delegates from Pacific countries.

First Pan-Pacific Press Conference—Honolulu, October, 1921.

First Pan-Pacific Commercial Conference—Honolulu, November, 1922.

First Pan-Pacific Food Conservation Conference—Honolulu, August, 1924. The International Sugar Technologists Association was one result of this meeting; also the Pan-Pacific Research Institution, where weekly science dinner meetings have been held regularly since 1924, and many visiting scientists from Pacific lands have been housed. The work of the Junior Science Council, including high school and university students interested in radio, photography, agriculture, botany, zoology, etc., is another activity of the Research Institution.

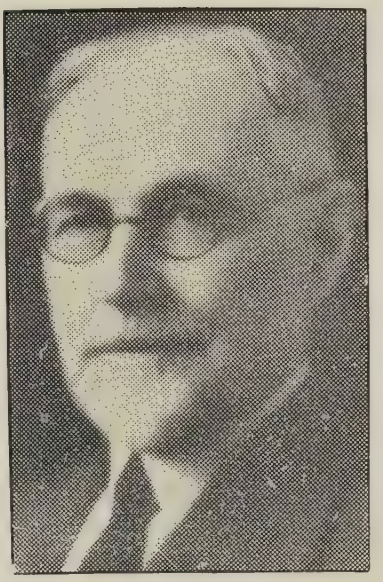
First Pan-Pacific Fisheries Conference—Honolulu, July to November, 1925. Dr. Ishikawa, one of the delegates from Japan, brought eggs of the ayu fish and spats of oysters and clams which were planted in Hawaiian waters with considerable success.

First Pan-Pacific Women's Conference—Honolulu, August, 1928.

First Pan-Pacific Surgical Conference—Honolulu, August, 1929. A second meeting will be held in Honolulu under the auspices of a Pan-Pacific Surgical Association organized at the first meeting.

Second Pan-Pacific Women's Conference—Honolulu, August, 1930. At this conference the Pan-Pacific Women's Association was organized, first organization of women of Pacific countries. The third conference was held in Honolulu in August, 1934, under the auspices of the Pan-Pacific Women's Association, assisted by the Pan-Pacific Union. The fourth conference is scheduled for the summer of 1937, to be held in Japan or Canada.

The Hon. Walter F. Frear, former Governor of the Territory of Hawaii, jurist, student of Hawaiian history and especially of its sociology since discovery, which brought problems innumerable. In this article he sets forth the missionary attitude toward those problems.



Anti-Missionary Criticism*

With reference to Hawaii

By WALTER F. FREAR

ON our recent South Seas cruise, after visiting this or that island, passengers not infrequently expressed regret that missionaries had ever gone there, for of course to them were attributable the depopulation of the natives, their deprivation of pristine Elysian happiness, their exploitation and the termination of glamorous ancient ways which so many tourists are curious to see—criticisms of the like of which Hawaii's past has been so redolent. Doubtless, little do most of us realize the extent to which susceptible visitors to Hawaii are still regaled, usually under cover, with anti-missionary talk, especially on the still-common charges of "narrowness" and "stealing the land."

Naturally, a book much read on the cruise was Herman Melville's "Typee" (1846), but the author, not content to rest his laurels on that classic romance of the Marquesas, went out of his way to add an appendix as to Hawaii, grossly misrepresenting nearly every phase of the Paulet episode and vilifying the missionaries—apparently in all sincerity.

On the other hand, now as never before are we in a position properly to appraise the missionaries; for, aside from cumulative general historical research and publications, better perspective of the historical facts, such older revealing volumes of personal reminiscences as those of Mothers Thurston and Judd and numerous publications by missionary fathers, sons, grandsons, daughters and others, the granddaughters are now producing a new and distinctive literature of exceptional merit as stories from a literary standpoint and as histories from the standpoint of extensive research, thus uncovering a mass of new source material and presenting remarkably complete and intimate pictures of the missionaries treated and their times—their intellectual and cultural status, their aims and methods, views and sympathies, trials and discouragements, struggles and triumphs, courage and endurance, joys, tact, wit and humor—indeed pretty much their entire personalities, thoughts and doings, largely from their own letters and journals written as they went along, but not for publication.

Under the fading influences of time and changing conditions, calumniation of the missionaries, though continuing widespread, gradually came to be less open and virulent and to be directed less against the missionaries proper and more against those of their descendants and others generally who were sympathetic with Christian ideals of betterment, especially if they were enterprising, thrifty, and well-to-do or stood for good government. The term "mission-

* Excerpts from a paper read before the Honolulu Social Science Association January 7, 1935.

ary" was retained by the detractors but with this modified and enlarged meaning.

The proneness of human nature, through malice, ignorance, recklessness, envy, prejudice, interest, or addiction to the sensational, to concoct or spread the false or to accept it as true, however easily refutable or inherently improbable, whether against missionaries or any other worthy group, here or elsewhere, may perhaps charitably be ascribed to the comparatively early stage of mental, moral and social evolution in which the world is still groping.

* * *

"Grabbing the land" is the most common surviving charge among *hoi polloi*, for it is definite and mundane, easy to make, seems to reach down to the present in its economic effects, and appeals to the sense of social discontent toward the well-to-do. Yet it is one of the most definitely refutable of all the charges, because the disproof in its very nature rests, not in the least on opinion, but wholly on indisputable, ascertainable facts. Credence in the charge rests on ignorance of the facts and natural propensity to accept it without examination. I do not propose to go into it here, because it has been covered as fully, precisely and interestingly as anyone could ask in the twelfth chapter of Bishop Restarick's book "Hawaii, 1778-1920, From the Viewpoint of a Bishop" (1924, revised 1925), and in the fourth chapter of Miss Jean F. Hobbs' book on land matters in Hawaii. The latter book, still in manuscript, represents some years of the most exhaustive research ever made of all records and literature on the subject, and, it is anticipated, will be published soon. I could not hope to improve on those chapters, and the best answer I can make to the charge is to refer the interested inquirer to them. I will merely add the most effective silencer that I have heard on this charge. A young woman, after listening for a while to an interchange of gossip on this subject by a group of homeward-bound tourists, suddenly interjected, "Is that so? My! I wish my missionary grandparents had got some of that land."[1]

Such sweeping charges as that the missionaries were the cause of depopulation and loss of pristine happiness are based, however unwittingly, on the patently illogical assumption that such results, if and in so far as they occurred, must have been due to the missionaries irrespective of the extent and character of non-missionary and anti-missionary influences.

Wisely New England missionary matrons designed for their Hawaiian sisters this comfortable gown despite the then prevailing fashion demanding torso-torturing "stays." In teaching the native women to sew, holo (go) started a seam and ku (stop) ended it, hence the name holoku. It is the characteristic gown of Hawaii today, has held its own for more than a century.

[1] See also pp. 33-35, The Human Side of Hawaii, A. W. Palmer, 1924, and pp. 70-76 of Prof. Alexander's reply to Bishop Staley [1865], to be referred to below.

Hawaii, as Captain Cook found it, was a land without any of the pests: mosquitoes, flies, gnats, poisonous insects, serpents, wild beasts, birds of prey, thorny or noxious plants, diseases . . . a veritable Garden of Eden where fertile soil, abundant pure water, and climate so heavenly as to challenge belief spelled paradise indeed. When the New England missionaries arrived they found Old World poison already working, strove mightily to check it.

The advent of the white man in the Pacific was inevitable, and especially in Hawaii, by reason of its size, resources, and, most important, its location at the crossroads of this vastest of oceans, rapidly coming into its own in fulfillment of prophecies that it was destined to become the chief theater of the world's future activities. During the forty-two years from Cook's discovery to the arrival of the first missionaries, and long afterwards, there came this way thousands of whites—beachcombers, Botany Bay convicts, fur-traders, whalers, and others, including blackbirders in the South Seas,[2] who, with noteworthy exceptions, lived up to the then-prevailing motto that "there was no God this side of Cape Horn," or, when they rounded the Cape, "hung their consciences on the Horn," as it was said, and who, bent solely on their own profit and pleasure, brought muskets, alcohol, and infectious and contagious diseases, promoted licentiousness and exploited the natives, without a thought for their rights or welfare.

In all reason, which group was accountable for depopulation—the group just mentioned or the group, comprising the missionaries and their coöperators, who strenuously combated infanticide, abortion, diseases, licentiousness and exploitation, and by instruction and example strove to fortify the natives, mentally, morally and industrially, to adjust themselves to the inescapable changing conditions? How long would the Hawaiians have lasted but for this timely intervention? Depopulation continued, it is true, after the missionaries came, but at a diminishing rate. And

[2] Black-birding is estimated to have reduced the population of the South Sea Islands by 75,000, and was practiced with cruelty rivaling that of the Atlantic slave trade.

New England missionaries, all youthful, had been taught severely that the human form should be fully clothed, yet they interfered hardly at all with the wholesome home life of Hawaiians, assumed no holier-than-thou attitude. Their battle was with the adventurers of anything but holy stripe who plied the gentle, hospitable and naturally righteous Hawaiian with every devil's device that civilization had evolved. Missionaries knew full well what nudity meant to the unregenerate foreigner, and knew as well that the Hawaiian knew not.

now, if the Hawaiians are to disappear as such, it will be by gradual fusion through intermarriage with other races, for Hawaiians and part-Hawaiians combined are decidedly on the upgrade, the Hawaiians decreasing slowly and the part-Hawaiians increasing rapidly.[3]

It may be of interest to note in passing, not so much to prove anything as to disprove the contrary, that the most hopeless of all the Polynesian peoples are Melville's Marquesans who, though claimed by many to have been the finest physically and mentally, and therefore to have had the best chance, have been least subject to missionary influences, and that among the most hopeful are those, such as the Samoans and Tongans, who have been most affected by missionary influences.

Melville was a believer in the myth of pristine happiness. In "Typee" he wrote: "Better it will be for them (the Marquesans) to remain the happy and innocent heathens and barbarians that they now are than, like the wretched inhabitants of the Sandwich Islands, to enjoy the mere name of Christians without experiencing any of the vital operations of true religion, whilst at the same time they are made the victims of the worst vices and evils of civilized life." He did not prove to be a good prophet.

The charge of loss of pristine happiness, besides being based, like the charge of depopulation, on the assumption that the alleged loss was due to the missionaries alone of all the foreigners who came this way, is based also on the assumption that there was such loss; in other words, on ignorance as to the prior conditions. We do not refer so much to war, infanticide and abortion, so prevalent still among so-called civilized peoples, and for which considerable might be said as applied to primitive peoples (or even to human sacrifices and cannibalism, the latter of which did not exist in Hawaii and for both of which something might be said), as to the poverty and oppression of the masses and the lack of justice and liberty under the tyranny and rapacity of the chiefs and priests and the severities of the taboo system. The commoner could not call his soul his own, much less his mat or poi or day's work. He lived in constant fear not only of his superiors but of a multiplicity of malevolent gods instead of the solace of a benevolent deity. We need not dwell on this. Suffice it to say that Prof. Roberts, after going into the evidence at length, concludes that it should "fully dispel any lingering ideas about the noble savage living in a state of idyllic bliss." Miss Alexander, in her book (p. 249 referred to), tells of a sea captain lamenting to Kamehameha III, with whom he sat drinking, "the good old carefree times before the coming of these missionaries," to which the king retorted, "You would have been dead three times; first, for not crawling into my presence face down; second, for standing on my shadow; third, for spitting before me."

* * *

A principal surviving charge is narrowness. On this how much might be said, pro and con, generally and particularly, but this paper must be brief. Perhaps we should turn the tables and say that those who charge narrow-mindedness to the missionaries are themselves too narrow-minded either to make due allowance for the times or to see more than one side of the picture. They portray the missionary mainly as an austere, long-faced Puritan ascetic, stalking about in a long black coat with a Bible under his arm, concerned only with the wrath of God, the horrors of hell, and the future life, and regarding joyousness in this life as a sin; and then judge him by their own

[3] From the census of 1920 to that of 1930, the Hawaiians decreased from 23,723 to 22,636, or 4.5%, Caucasian-Hawaiians increased from 11,072 to 15,632, or 41.1%, and Asiatic-Hawaiians from 6,955 to 12,592, or 81%; all increased from 41,750 to 50,860, or 21.8%. If this rate of increase continues, and it seems to be accelerating, the total will about double in a period equal to that since annexation. Captain Cook [1778] estimated, probably excessively, the Hawaiians at 400,000; Vancouver, who had been with Cook, said [1792] that there had been an "apparent depopulation"; the missionaries estimated the population in 1823 at 142,000; the first census [1832] showed 130,313. The total was officially estimated at 378,948 as of June 30, 1934. Thus, if Cook's estimate was anywhere near right, the population is about the same now as it was then, but has changed from extreme homogeneity to extreme heterogeneity. After sagging to 56,897 in 1872, it has been built up by other races.

present views. Let it be conceded that religious and sociological thought has changed considerably in the last hundred years. History shows that it is about as natural and universal for each generation to indulge in a superiority complex over preceding generations as it is for each nation to indulge in a similar complex over other nations. It is hard either to recognize the merits of those who differ from us or to comprehend the significance of the evolutionary process, and the less we know of another people or generation, the more critical of it we are.

* * *

Luther, Calvin and Knox broke away from formalism and indulgences for justification by faith, personal relationship with God and liberty of conscience; the next century our Pilgrim and Puritan forbears, in whom we take such pride, took another jump for religious freedom and independence, this time across the Atlantic; then after exactly two centuries (1620-1820) of further liberalizing, in which Jonathan Edwards was passed, the missionary pilgrims came pioneering five times as far around the Horn, to become themselves, with new experiences and new problems, even broader and more tolerant than the church people they left behind and the Board that sent them out.

* * *

But were the missionaries so narrow? They were, or soon became, among the broadest Christians of their time, and what more could be expected of them religiously? It mattered not to them that they were of different denominations among themselves; and they extended hospitality to others of whatever creed or race. As one of them declared: "I allow my friends to differ from me in views and sentiment. Let us still be friends."[4] They were educated and cultured, of good stock, and yielded a numerous progeny that, under their heritage and nurture, made splendid, and in some cases distinguished, records here and elsewhere. They had wide personal interests; they were fond of literature and science; they had their book and magazine clubs; they were historians and archeologists and sociologists; they kept meteorological records; they geologized and botanized and conchologized; they gave the Hawaiians a literature, and preserved from oblivion much of their ancient history and folk lore; they delighted in the grandeur and beauties of nature, loved music and flowers, took difficult mountain hikes and hazardous canoe voyages; joyousness was almost a duty with them; they liked games and anecdotes, jokes and puns.

Though in many cases married to hastily found mates shortly before sailing, they lived marital lives that were exemplary in their fill of love and devotion; their families—parents and children—were models for affection and mutual helpfulness; with mere pittances of salaries or rations, often unable to obtain suitable food, living at first for years in cramped, leaky, floorless thatched houses, with little privacy, often ill or child-bearing with no doctor available, and no end of calls for self-sacrificing services, they were marvels of patience and faithfulness.

They had to be all-round mechanics and farmers, building houses and churches of stone, adobe or wood and thatch, making furniture, and raising fruits, vegetables, flowers, and dairy and poultry products, not to mention surveying, doctoring, and peacemaking; in their ministering they had the courage of their convictions, not hesitating to discipline chiefs—especially when the latter oppressed the common people, for they were very democratic champions of the rights of man.

Realizing that religion alone was not sufficient, they introduced the school and the press, as well as the church, established manual training schools, the first of their kind, taught new industries, mechanical and agricultural, incessantly inculcated the rights of the common people—with the result that in approximately a quarter of a century this handful of zealous, intelligent, practical workers, with their sympathizers, largely Christianized the nation and made it one of the least illiterate, trans-

[4] Lowell and Abigail, p. 260.

formed the government from absolutism to constitutionalism, secured to the masses personal and property rights, enabled them to acquire homes of their own, preserved the independence of the nation against great odds and, what perhaps may prove to be the crowning feature, planted the seeds which have fruited in the world's best object lesson of interracial brotherliness.

The foregoing is a sort of composite picture but, of course, the missionaries varied greatly, like the members of any other group of people and, although very godly-minded, were also quite human. Mother Thurston, last survivor of the first company, said the day before she died (1876) that she had "a great deal of human nature."[5] Her athletic husband, Yale 1816, had the high honor of election as "College Bully" to champion the students in the conflicts of that day between town and gown. When he landed at Kailua, a big negro down the coast, fearing that the missionary influence would not be helpful to his nefarious business, gave out that when he met Mr. Thurston he would do him up. Mr. Thurston, hearing of this and learning one day that the negro was on his way to Kailua along a path between two high stone walls, took pains to meet him and told him that now was his chance. The negro made for him, whereupon Mr. Thurston picked him up and tossed him over one of the walls, thereby securing his respect ever after. This story may be apocryphal, but, if so, there are other authentic stories, not so dramatic, in which Mr. Thurston's prowess came handy.

While the missionaries were not all Thurstons, they were no namby-pamby lot—as numerous citations might be adduced to show. Bishop Restarick (History, p. 50) quotes Jarves, "man of the world," nephew of a missionary, here five years for his health, as saying, "My aunt could work, scold, preach, wash, bake, pray, catechize, make dresses, plant, pluck, drive stray pigs out of the garden. There was nothing useful in this wilderness which she could not do."

[5] For a thrilling story of a heroic life, see Life of Lucy G. Thurston [1882, 1921 and 1934].

The matters, other than the theological and ecclesiastical, in respect of which the missionaries have been accused of illiberality, include such things as clothes, sports, liquor, tobacco, gambling, dancing, and licentiousness. A few will be touched upon—by way of illustration.

Tobacco-smoking, now regarded as such an innocent pastime even by clergymen, exemplifies the problems under the then-existing situation. The natives were quick to imitate the white man, whether as to clothes, liquor, tobacco, cards or other things. Liquor seemed in a fair way to destroy the nation until curtailment of its use, first by Kamehameha I, and then, more importantly, under the missionary teachings.

When the natives learned that the "fire-breathing" men of Captain Cook's vessels were merely smoking, the indulgence spread like wildfire, and soon practically every home "from Hawaii to Niihau" had its tobacco patch. Smoking not only was excessive but was mostly with short pipes, which were passed from mouth to mouth until very hot, and the smoke was inhaled into the lungs, held there for a while, and finally exhaled through the mouth and nostrils. The effect seemed highly deleterious and demoralizing to the natives, whatever it was to others—to say nothing of other dire results, such as setting thatched houses on fire at night.

Not unnaturally, the missionaries advised and published tracts against this —not that smoking was sinful in itself, but that as pursued it was injurious. * * * Later, owing to changing conditions, tobacco gradually lost its significance as presenting a moral question, and its raising came to be encouraged as one of many minor industries.

Clothes have been a much-debated matter, from the viewpoints of both health and picturesqueness, with much said on each side—and perhaps even more that might be said on the view that it is not so much a question of clothes or no clothes as what clothes and how to use them. At any rate the missionaries have been blamed much for being shocked at nudity and en-

couraging the use of clothes. Of course, they could no more stem the native desire if they wanted to than King Knute could stem the tide. But two things they did do: they tried to teach the natives the healthful use of clothes; and when the queens, accustomed to wind themselves with yards and yards of the native *kapa,* or the imported silk, asked the missionary wives to make dresses for them, these wives introduced the simple, dignified, loose-fitting *holoku* (modified empire gown), which has ever since held its own, against all other fashions, as the distinctive, typical Hawaiian woman's dress—in marked contrast with the fashion of that day in civilized (?) countries "that demanded the bodice be laced across a stomacher, i. e., a narrow board beneath the gown and over the vitals, the drawing of the cords to accomplish the desired slimness being accentuated by means of the bedpost as a stanchion"—which caused or hastened the deaths of so many innocent young women. In a sense the missionaries anticipated present-day freedom and simplicity as compared with Victorian prudery and unhygienic grotesqueness.

* * *

Mark Twain, when living in Hawaii in 1866, wrote on the results of missionary labors: "The missionaries have clothed them, educated them, broken up tyrannous authority of their chiefs, given them freedom and the right to enjoy whatever their hands and brains produce, with equal laws for all, and punishment for all alike who transgress them. The contrast is so strong—the benefit conferred upon this people by the missionaries is so prominent, so palpable, and so unquestionable, that the frankest compliment I can pay them, and the best, is simply to point to the condition of the Sandwich Islanders of Captain Cook's time, and their condition today. Their work speaks for itself."

Orient Most Active in Pan-Pacific Affairs

REPRESENTED in every Pacific country, the Pan-Pacific Union registers more organized, active, affiliated associations in the Orient than in any other part of the Pacific area. Some of the well-organized and continuously active associations are:

CHINA: The Pan-Pacific Association of China, 190 Peking Road, Shanghai. Tong Shao Yi, former Premier of China, Chairman of the Board of Governors. Mrs. Margurite C. Chen, Secretary.

The Pan-Pacific Association of Shanghai, 190 Peking Road, Shanghai. C. T. Wang, President. Mrs. Margurite C. Chen, Secretary.

JAPAN: The Pan-Pacific Association of Japan. President—Prince Iyesato Tokugawa.

The Pan-Pacific Club of Tokyo—headquarters at the Imperial Hotel, luncheon meetings every Friday. President—Viscount T. Inouye.

The Pan-Pacific Good Relations Club of Tokyo.

The Pan-Pacific Students Club of Tokyo.

The Pan-Pacific Cosmopolitan Club of Aoyama Gakuin.

The Pan-Pacific Club of Kyoto.

The Pan-Pacific Club of Nara.

The Pan-Pacific Organizations of Nagoya.

The Pan-Pacific Club of Osaka.

The Pan-Pacific Student Body of Hanshin.

PHILIPPINES: The Pan-Pacific Association of the Philippines. President—Hon. Manuel Quezon; Secretary—Gregorio Nieva; Editor, "Philippine Review," Manila.

Pan-Pacific associations everywhere in the Pacific are requested to send their addresses to the Pan-Pacific Union, 1111 Union Street, Honolulu, Hawaii, U.S.A., for its directory of Pan-Pacific associations and clubs. Travelers often ask the Pan-Pacific Union for this information.

Koala, whose diet of eucalyptus leaves not only keeps the doctor away but all carnivora as well, didn't know about man's lust for beaver hats, for which his soft fur was once prized and for which he was well-nigh exterminated until government stepped in.

Wild Life at Jenolan Caves

By J. C. WIBURD

AUSTRALIA'S flora and fauna are among the richest, oldest and most peculiar in the world. With the exception of a few bats, rodents, and marine forms, all the indigenous mammals are marsupials and monotremes.

There are upwards of 100 species of marsupials, grouped according to their feeding habits as eaters of grass, fruit, flesh, insects, and roots. The bird life ranks, in number and beauty, next to that of South America and tropical Asia, while of the 12,000 known species of plants more than one-half are found only in Australia.

The accompanying article by Mr. Wiburd appeared in Volume I, No. 1 of *Australian Wild Life*, a journal of the Wild Life Preservation Society of Australia, which society will have completed in May a quarter of a century's earnest work in the cause of fauna and flora protection and conservation.

It is of interest to note two of the matters which occupied attention at the first meeting: one the necessity for protecting the fast-disappearing koala or native bear, and the other was a complaint as to the use of cyanide potassium for killing marsupials. Both of these matters have occupied the society's attention more or less ever since, with a host of other questions of importance to the preservation of Australia's unique fauna and flora.

SUCCESSIVE State Governments in New South Wales, Australia, have gone to great trouble and expense to make of Jenolan Caves the foremost tourist sight near Sydney, but, in my opinion, probably the greatest single improvement was to make the Reserve a sanctuary for all birds and animals.

Associated with Jenolan for so many years, both before and after the passing of the act, I have been able to appreciate just what effect it has had, and can testify to its beneficial results.

At one time every bird and animal at Jenolan was not merely timid, but was actually frightened at the sight of humans and fled at their approach. Rock wallabies were seldom seen about the arches of the Caves House, and even long-distance photos of them were difficult to secure.

Called "Laughing Jackass" for his voice, the kookaburra is nobody's fool, a useful citizen of the bush and not without many virtues.

This fear was the result of visitors' actions when they took advantage of fine days to go out into the scrub and kill something, or, as they put it, "for

Fairyland splendor of Jenolan Caves, N.S.W., Australia, where government has gone to great expense in preserving Nature's handiwork and making it comfortably available to visitors. Below, baby kangaroo plumps into mamma's pouch at first hint of danger that might demand much hopping for little legs not yet too reliable.

a day's sport." Often they returned home laden with innocent victims; a couple of dog birds, lowry parrots, gang-gangs, a lyre bird perhaps, a native bear and a wallaby skin. The only bird of any value to the hunters was the lyre bird, whose tail at that time was worth about ten shillings.

The destruction of wild life was one of the attractions of the resort, and the Government advertised that there was "good shooting near the Caves House." As a result I have seen a magpie, a friend and favorite of the permanent residents, shot to pieces just outside the hotel by a "sportsman."

The magpie is a home-lover, but though he is willing to protect his nest at any cost, no bird knows his friends and enemies so well or loves harmony so much. He is the policeman of the bush. At the Caves I have seen him help a domestic fowl protect her chickens from a hawk, or aid another bird in defending her nest, and even try to stop two rock wallabies from fighting!

Often when I have strolled up the creek bed, one pocket filled with white ants' eggs, one with seed, and carrying a scrap of bread or toast, a distant call has sent the birds and animals which crowded round my familiar figure scampering for cover. Looking up, a magpie could be seen perched on some dead tree on the cliff-top watching the flight of a wedge-tail eagle which had floated over unseen. Nor would the feeding continue until the sentry had given his all-clear signal; while if the intruder ventured too far down, it was not un-

usual for the magpie to go aloft and tackle him single-handed. Such are the habits of the magpie, and from the death of any one of them might result the destruction of dozens of the more timid creatures of the bush.

Today the wild creatures are quite friendly and trustful of all, quite willing to be fed by anyone who smuggles half a bread-roll from the Caves House. They are one of the greatest attractions of the Caves Reserve; probably tamer, and certainly more beautiful and attractive, than most of the human bush walkers I have met!

Of course the kookaburra (laughing jackass) is a favorite, and though for all his reputation I have never seen him kill a snake which was capable of killing anything else, he is not without many virtues. In one remarkable tree at Jenolan lived a jackass, a hive of bees and a large diamond snake, all of them entering their home through the one hole. When the snake was killed it was no fault of Jack's but due to a blow from a heavy waddy wielded by a human. Kookaburras don't spare mice or rats, though I have also known them to take as many as five six-day-old chicks from a run in one day.

At one time, after the Reserve had been made a sanctuary, representations were made—and successfully opposed—to have all the hawks killed because some chickens were found to be missing from the Caves House. After all, it was much easier to protect the chickens than to kill the hawks—even if they could have been proved guilty—and chickens are not the only things hawks attack.

Often as I walked from the house to the top dam across a bracken and scrub-covered hillside, two or three chicken hawks would hover round and pounce on the rabbits I disturbed.

Today visitors go to Jenolan not only to inspect the caves, but also to see the wild life which is so abundant there and so tame and friendly. Tourists can reasonably expect to see lyre birds, coachwhip birds, butcher birds, jays (white-winged chough), satin bower birds, grey magpies, kookaburras, gang-gangs, many kinds of parrots, black cockatoos, gillbirds, leatherheads, honeyeaters of many varieties, four kinds of robins, flycatchers and many of the tits and wrens. There are many lizards and an occasional snake—though these are a hundred times more frequently "nearly trodden on" than caught—and scrub and rock wallabies, wallaroos, grey possums and ring-tail possums, common wombats and squirrels.

We must remember that these creatures are not only alive because they live in a sanctuary, but also that since they have been protected they have learnt to lose much of their fear of humans, and now give added pleasure by their friendliness.

Alexander Hume Ford, center, with, at the reader's left, Burton Holmes and Edward Price Bell in the grounds of the Pan-Pacific Research Institution, Honolulu, Hawaii, U.S.A., 1925.

What Japan is Doing

Introduction to, and excerpts from, a forthcoming book on highways and byways of Japan

By ALEXANDER HUME FORD

WITH the publisher's permission THE MID-PACIFIC MAGAZINE takes pleasure in presenting in this issue a few bits from the forthcoming book by Alexander Hume Ford on forty years and forty days of observation throughout the highways and byways of the Japanese Empire. The book will delight readers who enjoy armchair travel, in which the explorer does all the work, accumulates all the fatigue, indigestion, insomnia and other incidentals.

For those who like to move swiftly, yet miss nothing of consequence concerning a land and its inhabitants, Mr. Ford's sprightly narrative will prove generously satisfying. To those who know the author personally, the mind's eye will see him darting from place to place, head thrust forward as though his legs, quick as they are, forever fail to keep up with insatiable curiosity about human beings and their ways.

Mr. Ford's writing, like his well-known automobile driving around Honolulu, ignores traffic rules, is apparently reckless, yet no collision hurtful to either party has been chalked up against him on the road or in literature. Maybe, after reading his forthcoming book, you can figure out this carelessly adroit father of the Pan-Pacific Union, whose forthright phraseology makes you know you are going somewhere and whose powers of observation make you know you have been there.—THE EDITORS.

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INTRODUCTION by The Author: This volume might be entitled forty years and forty days of Japan—forty years of delightful visits on and off; forty days of intensive observation from a car window over six thousand miles of travel in unfrequented portions of the Island Empire.

Forty years seeking to understand Japan and the Japanese, forty days of realization that I never shall, yet in those forty days I have learned to like and know both Japan and the Japanese better than ever before. Perhaps it is because I have learned to understand them less that I like them more, and am glad of it. Why try to understand people? We never can. I like Japan and the Japanese, and for the future, that will be all-sufficient to me. I shall never again try to understand them.

I offer this volume merely as a series of notes on travel and customs in Japan, as seen by a foreigner. It is a book

VLADIVOSTOK
Odomari
Wakkanai
HOKKAIDO
SEOUL
CHOSEN
JAPAN SEA
Otaru
Asahigawa
Takigawa
Kutchan
Sapporo
Mt. Shiribetsu
Shiraoi
Noboribetsu
Hakodate
Aomori
Hirosaki
L. Towada
Akita
FUSAN
Taisha
Izumo
Imaichi
Matsue
Nota Peninsula
Nanao
Niigata
Yamagata
Matsushima
Sendai
Niitsu
Kanazawa
Naoetsu
Nagaoka
Shiogama
Hakata
SHIMONOSEKI
Amanohashidate
Maizuru
Toyama
Nagano
Koriyama
Fukuoka
Okayama
Miyazu
Tsuruga
Kurume
Nakatsu
Himeji
L. Biwa
Karuizara
NAGASAKI
Unzen
Beppu
KYOTO
Shiojiri
Takasaki
Misumi
Oita
Kumamoto
Hikone
Gifu
Takamatsu
Takahama
OSAKA
Nara
Mito
Hitoyoshi
Oji
Kofu
Wakayama
Kagoshima
Tamolaka
Miyazaki
Mt. Fuji
TOKYO
SHIKOKU
KYUSHU
PACIFIC OCEAN
LEGEND
Route of Mr. Ford's 40-day Tour

HAKURO CASTLE SHIMOSA

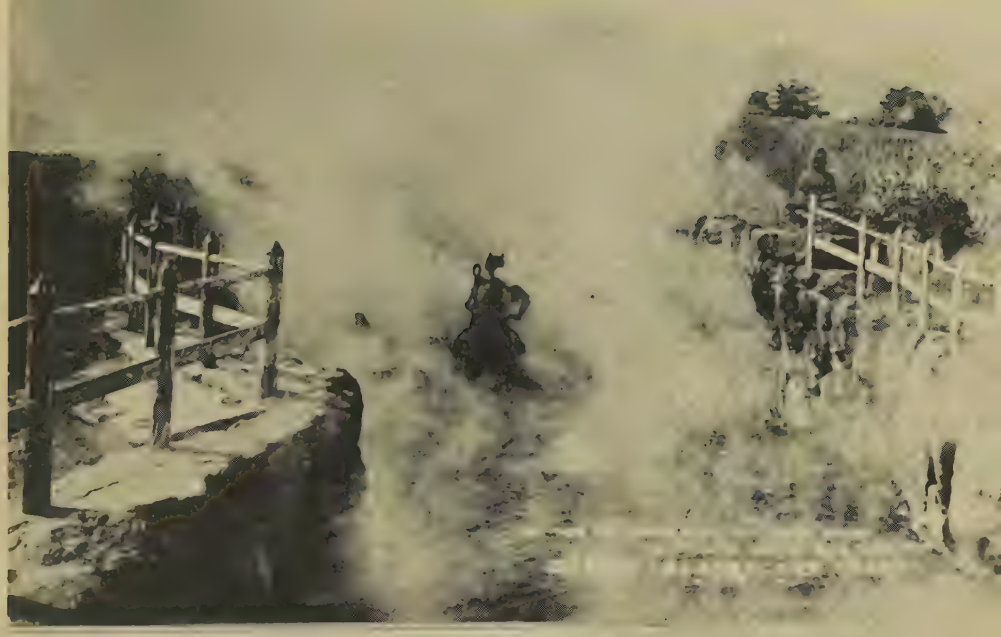
Peaceful now midst the cherry blossoms, this imposing castle in Hirosaki is eloquent of embattled days when feudal lords kept uneasy house behind moat and wall and narrow slits of windows designed for deadly archery.

Where feudal lords held sway

From 1159 to 1602 A.D. the Daimyo (Big Names) or feudal lords flourished and strove each by arms to become dictator. In 1602 Tokugawa prevailed, established his shogunate, which gracefully yielded to Meiji Tenno, the Daimyo concurring in 1869, restoring the Empire, ending civil war. Some of the ancient castles of note are shown on this page. Upper left, Fukuyama; next below, an outer wall and moat, and at the right, bronze statue of Lord Naomasa Matsudaira. Below, left, glimpse of Castle Himeji and, right, portcullis of Castle Kanazawa. Opposite page shows architectural details of three famous old castles. Top, Matsuyama; next below, Fukuhara and, lower, Hakuro.

The gate "Ishikawamon" of the Castle of Kanazawa.
(Park "Kenroku," Kanazawa.)
石川門 兼六園 金沢 (兼公六園金沢)

A place of interest; Matsuyama.
城山松（所名山松）



Risemu, ceremonial dance of the Hairy Ainu, said to be part of the ritual for bear worship which includes liquidation of the bear as a blood sacrifice and soul messenger to supernal headquarters. Strongly suggests kinship with the Alaskan tribes

HAIRY AINUS, Aryan aboriginals of Japan, inhabit the north in steadily decreasing numbers. Above, Mr. and Mrs. Ainu drinking kamui, a ceremonial in which father valiantly carries the load while all mother has to do is act as observer and get the ice water ready. Next below, Ainu spearing trout for next week's breakfast, as he likes his fish "high." Bottom, fisherman putting to sea in his canoe, which resembles that of the Alaskan Indian.

Tango has nothing to do with this performance. It is called matanozoki (looking through your legs) and Tango is the province in which is located this lovely lake with, in middle distance, Amanohashidate (Bridge of Heaven). Standing on your head is said to enhance the beauty of this view. Ladies wishful of getting their money's worth of matanozoki are advised to wear shorts.

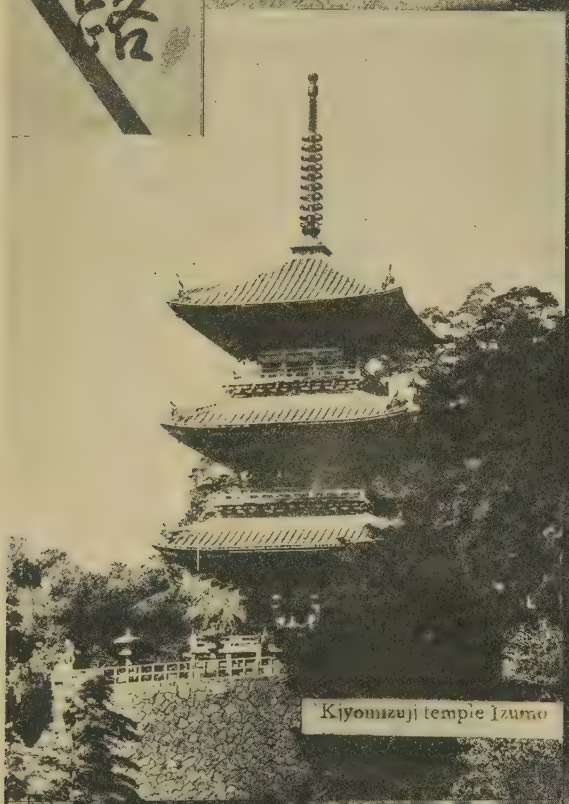
Contrast this lovely scene of balmy beauty with that on the opposite page. Japan is a country of versatile beauty as well as of versatile accomplishments.

Beauty is in the eye of the beholder, 'tis said, hence it may be assumed that the writer of the title for this view is a native of Karafuto where winters are plentifully adorned with beautiful snow.

Temple of Godaido, Matsushima, one of the Big Three scenics of Japan.

Forgotten
the tribulation
of life
as we gaze
upon the
evening moon
in the cool
breezes
of Godaido.

日本の大路小路



Kiyomizuji temple Izumo

新日本 MODERN JAPAN

VIEW OF HIGASHI NAKASU STREET, THE MOST BUSTLLING PLACE, FUKUOKA AND HAKATA.
（福岡と博多名所）東中洲通りの最も繁華な街景

FLOURISHING VIEW OF THE STREET WITH THE TRAM-CAR LINE WHERE GRAND BUILDINGS STANDING IN A ROW, OITA.
（大分名勝）大廈高樓櫛比せる繁盛なる電車通りの景觀

THE NEWLY STYLE STATION PREVIOUS OF AN OPEN SPACE, SHIMONOSEKI.
（下關名勝）新裝成れる … 驛前廣場の盛觀

written by a foreigner for foreigners, written by a foreigner who believes that as one foreigner sees and judges, or misjudges, Japan and the Japanese, so will other foreigners. I have seen the scenic glories of Japan, as I have never seen them before. I have met the common people as I have never before mingled with them. I have traveled continuously for forty days through the most beautiful land of scenic wonders in all the world, and I am content. What I have written down has been the honest impression of the moment. If I have wounded at any time in these notes the vanity of my friends, the Japanese, I am truly sorry, but I cannot change my views "on request." I am a Nordic and think with the mind of a Nordic.

I have written down my thoughts of the moment freely. I have changed my views as freely, and so recorded, when better knowledge or acquaintance compelled. I have read my notes and I have made almost no changes for the reason that to change their verbiage would be to destroy their freshness. I have found after my voyage is over that I can enjoy reading my notes of the day jotted down in some castle turret, on board a speeding train, or in a quiet Japanese inn. Without those notes I could never recall the events save vaguely. The impressions of forty days of sightseeing in a land where all the world is a swiftly passing panorama of color can never be recorded at the end of the voyage. Lafcadio Hearn bewailed the fact that he failed to jot down his first impressions of Japan as they occurred, for never again could he catch them. It was this urge of the greatest writer of the beauties of Japan that tempted me to spend forty days recording daily new and first impressions of things Japanese.

I traveled for these forty days throughout little-visited Japan, where the foreigner is never met, and it is seldom that even a Japanese who speaks the English language is encountered, actually less than once a week, and I not only got by with it, but I advise others to follow in my footsteps and see Japan through their own eyes. If you are a Nordic, act the Nordic, and plunge in for adventure. Japan from end to end is absolutely safe for the foreigner; man, woman, or child. The Japanese are the most polite people to the stranger in the whole world; they are an obliging people, and you are safe in their hands. They own the most beautiful country on the face of the globe, only a small portion of which is known to the foreign tourist; its greater and greatest scenic glories are seldom seen by the white man. I have seen them, and so may you.

If these notes of my forty days of Japan from a car window tempt you to leave the beaten track and see something of the great, real Japan and its people, I shall feel that I have accomplished something far more important and satisfying than merely reaching out for elusive royalties, much as I desire them.

Bits from the book

OYSTER ISLANDS: Shiogama Bay might well be named the "oyster bay of Japan." Oysters, oysters everywhere, but not a one to eat; they are all shipped to the big fish market in Tokyo, the largest in the world.

The entire bay of Shiogama is a veritable oyster bed. In the town you see sturdy young women under open sheds shelling oysters, but nowhere here, or in fact in any part of Japan, do you see the oyster on the half shell displayed for sale as in America, where, along the New York and Baltimore waterfronts and at the seaside resorts, the proprietors of the oyster stands open their wares for the stranger with a penny to invest; a penny an oyster on the shell, with pepper and vinegar included. None of this in Japan, for the Japanese do not seem to be raw oyster-minded, or tasted. Everywhere you may have raw fish offered you to eat, but not raw oysters. Perhaps there is a reason. In fact I have seen them dredging for oysters in Tokyo harbor in the very vicinity of a sewer. The Japanese have learned wisdom, and therefore follow tradition—cook your oysters in Japan, although at the foreign hotels they do serve guaranteed deep-sea oysters on

the half shell, and they are delicious. Many tons of oyster spat from Shiogama are sent to Puget Sound to be planted there and provide years later oysters on the half shell for the population of Seattle.

The voyage of the little steamer down Shiogama harbor to the big bay is a study in Japanese shipping of the old, old days, and in the shipyards ashore of the methods of shipbuilding in the Japan of yesterday. Once out of the narrow harbor between the mountains, you enter the great oyster area. Oysters growing on trees, that is trees and twigs stuck in the mud everywhere for miles, and the oysters clinging to these, forests of oysters.

* * *

BEAUTY CULT: Japan takes care of the cultural education of her children. It is the end of October and still these school children of tender years flock from points hundreds of miles away to be given lessons here in the art of admiring beauty in nature. Beauty admiration is a cult in Japan—its best; it is the cult of the common people, and natural. The cults of the nobles and upper classes are carelessly manufactured and full of flaws; they don't fool the foreigner; he is something of a hypocrite himself with his traditions of a culture that was never in real existence.

It cost the student but four or five yen from Tokyo and return, with a day at Matsushima. I have seen the floors of the Japanese inns turned into sleeping quarters for a hundred, and the launch I would pay six yen for and occupy alone, crowded with scores of Japanese youngsters at the same price. God bless the Japanese for the care they take of their children in teaching them to love the beauties of nature.

On the Odate jerkwater train I ran into one of my little human documents. The train guard decided to try his English on me. Now, when a Japanese student tries his English on me, I give him every latitude, for invariably he teaches me something. I get more out of him than he does out of me.

My human document's opening was a demand to see my ticket. It was a pass with my name written on it in Japanese. He opened up and asked me all about my family history—both sides of the family. I countered and found that he was a graduate of the middle school of Morioka in northen Japan. I was probably the first foreigner he had had an opportunity of talking English with since he graduated. He was young; he was married; he had had a son, born dead, and he is contented with his position, traveling back and forth all day, and when away from home at night sleeping on a sleeping car. It is pleasant to meet these trusting young men of Japan, not too long out of school, and to listen to their honest, ingenuous confessions. I like them.

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ENGLISH SPOKEN—MAYBE: The more I travel in other lands the more I realize that I love most to travel in Italy and in Japan. The guidebook says that everywhere in Japan English is spoken, even in Hokkaido. I have traveled a full day in Hokkaido and have found no one who speaks English, or anything like it. But that is all right; I carry fifty-sen pieces in one pocket and ten-sen pieces in another and money speaks right out loud in any and every language in the world. Moreover, wherever I meet a Japanese and can get him to discover what I wish, he is obliging.

In Hakodate I found one inn after another filled to repletion, until at last on a side street I found a small but delightfully clean inn, where by resting my hand on my head I made the proprietor understand that I wished to sleep. He motioned eating and I shook my head. He wrote down 1.50 on a piece of paper; I knew that the room for the night without food was a yen fifty, and we struck a bargain.

Fact is, the railway and tourist bureaux *can* get English-speaking men to fill these positions, but they cannot select their men always at discretion. They must give positions to those who are sent them by higher-ups. If Count Ito or Viscount Mito says an applicant

speaks English, that settles it. Officially he speaks English, whether he speaks it or not. The feudal lord has placed his man, and in Japan that is all that counts. He has a life job of which mere incompetency will never deprive him—he is well recommended.

Of course, I should travel with a Japanese phrase book in England and Japanese, but I won't. I have been in Japan too long to take the risk. Every policeman along the route and every guard would insist on spending hours practicing his English on me—not much. I just say, "I don't speak Japanese," let it go at that, and go on with my reading and writing; it saves a lot of time.

Isn't it odd an American will remain in Japan for fifty years and not speak the language and still laugh at the Japanese as being slow-witted for not learning to speak English fluently? Oh, we hypocrites! And I am one—four years this time in Japan and scarce a word, certainly not a sentence. Is there a Japanese who has resided for a year in America who does not speak understandable English? I doubt it. And we call them poor linguists! My policeman at Izumo spoke at least ten words of English, and at most I spoke six words of Japanese. Oh, we Nordic hypocritical lords of creation!

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PATENT MEDICINES: Another habit I find here that prevails from one end of Japan to the other—the posting everywhere of the two Chinese signs for a certain proprietary pill, manufactured by a millionaire pill capitalist in Japan and advertised on barn sides from one end of the Empire to the other. You are never, it seems to me, more than a mile away from one of these signs.

For years I read it "Warehouse" until a missionary explained to me that the two Chinese characters described "Pink pills for pale people." Our American pink pill, however, made the fortune of one well-known American writer I know who traveled as its salesman from one end of China to the other, and so secured material for his best seller. He would not have dared offer the Chinese this Japanese pill; they would prefer death their own way. Japan, America, China, all have one custom in common—they are all pill addicts and believe in them. Oh, the power of custom and habit!

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JAPANESE MENTAL PROCESSES: Is it possible to make a Japanese see any side of a question but his own or that his government has taken? I think not.

If an Imperial rescript confirms Japanese opinion or decision on any matter, it becomes disloyalty and treason to disagree with the will and word of the Emperor. It becomes true to the Japanese whether it is true or not. If a Japanese tells you a thing is so thrice, then he believes it himself and expects you to. After he has told you that he has explained the Japanese side of a question, he expects no further argument from you. He has explained, and that is sufficient.

It is the megalomania of the Japanese that causes him to send men to America to explain Japan's attitude. They even send ambassadors at large around the world to "explain and clarify" and it is seldom that their explanations explain, but that does not matter. They are given, and other nations must be polite enough to accept Japan's word and not contradict or argue. It would be humorous if it were not tragic.

To the Japanese there are two sides to a question — Japan's side and the wrong side. You can't make him see otherwise. Don't try.

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AINUS: The Ainu houses are best told by the fact that they are built of grass, with higher peaked roofs than are the Japanese grass houses. Moreover, within they are more sensibly arranged. You can walk into an Ainu house on a splendidly polished floor of hardwood without taking off your shoes and catching your death of cold. If there are any mats they are incidental and not essential.

Ainu children at first are hard to tell from the Japanese, for in this land far

from real Japan, the children become independent and fearless. There is less family and school mental suppression, yet the Ainu children are even less fearful and more smiling. They seem brighter and more cheerful; their sharper features give them a more European air, and some of their women are as clear-featured as the Nordic, far more vivacious in expression than the men.

I wandered down to the Ainu beach and was soon friendly with the youngsters who were helping their parents prepare the canoes and sampans for the night fishing at sea. Only in Hawaii have I seen youngsters so perfectly and fearlessly independent with the canoe, or sampan. They took complete charge, relegating their parents to the background and launching the boats in the surf themselves. Boys from five to twelve years of age shoved off from shore and went to sea, using the short scull, almost a paddle, which they handled with adeptness. To the tourist this little group of Ainus would prove a disappointment; to a student of ethnology, a treasure-trove.

At the end of an hour I wished to spend a day or a week with them. The tremendous difference between the Ainu and the Japanese began to make itself observed. I began to discover a longing to know these people better. They seemed to be nearer to my people than any I had met in the Orient and I wished to understand why.

No one knows from whence came the Ainu, but it is a fact that from Kamchatka one may walk on the ice in winter to Saghalien, and Saghalien is within sight of Hokkaido, and Hokkaido is within sight of Japan, the home of the Ainu. When the Japanese invaded their land, they drove the Ainus farther and farther north until at last a remnant crossed to the island of Hokkaido, or Yezo.

In the olden days they were good fighters, these Ainus. Even today, they kill the grizzly bear in far-off corners of Hokkaido and here in Shiraoi try to sell me bows and arrows with which the killings are made. There has never been a Hampton Institute or a Carlisle College in Japan where the Ainu might be given an intellectual chance. I do not know of a single Ainu university student in Tokyo. The Japanese do not approve of giving higher education to their subject races. I think they make a mistake, but then that is none of my business. We have tried the experiment in America and have found that you can't teach a man to lift himself by his own boot straps. No one knows where the Ainu or the Indian came from. It seems clear where the Ainu is going, but I will gladly educate one in Hawaii, Japan permitting.

It is possible that the Eskimos and the Ainu are of the same kindred races. They will both probably go the same way to extinction, being stone-age races.

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HOKKAIDO, THERMAL REGION: Multiply the size of the dainty Japanese inns I knew thirty years ago, say tenfold, and you have a vision that burst on me of a row of giant Japanese hostelries perched on the mountain sides, surrounded by forests, lights gleaming — seemingly from a million windows. It was staggering in its fairy-like splendor. It was more dainty than any stage suggestion of Japan. It was real, but I did not believe it. Here before me were rambling inns as large as the great hanging temples at Kyoto. Two, three, four, five stories of loveliness, and in the old days my inns of Japan, treasured in memory, were but two stories at most. Here was Japanese architecture as it would have been if left to its own development without foreign suggestion. The main street, no, the main avenue, ascended gently. On either side were fairylike buildings and at the summit a great, rambling, ethereal palace—surely the work of fairy hands, for it was too delicate to have been fashioned by man. What mattered it to me if it was a great, tremendous, hotel fire trap. What a glorious, dramatic death, a death worth while in such a pyre. I did not hesitate a moment. My hotel was at the lower end of the heavenly avenue to the regions of hell, for the great fairy hotel

was seen only through a cloud of sulphur fumes.

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When daylight came I arose and went forth. Alas, by daylight my hotel was but a great New England caravansary in shape, save that the entire front was a mass of windows, and every window is illuminated at night. No New England Yankee would go to that expense.

On the one main street, lighted the night before with a single string of red, white, and yellow lights its entire length to the fairylike hotel and the entrance to hell, there was now the pitiless glare of daylight, the destroyer of romance. There were many charming, airy, fairylike Japanese inns, but alas, sad to relate, daylight disclosed the fact that here and there were the sordid foreign stucco or concrete monstrosities.

Even in daylight there is a fairylike charm to this onsen (hot springs) of Hokkaido. It begins again at the head of the one street that, at night, is all fairyland. At the summit of the street is the great, rambling, dainty bit of filigree work that does service as an inn. From the little river of boiling water that flows below, clouds of steam and mist arise to make it more ethereal and airy than ever. Its beauty is indescribable. There is no hotel in all the world that has the same beauty and effect of floating in the clouds, or in a dream. It stands alone; it does not seem real; it is too beautiful for reality. I did not enter within to dispel the illusion.

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HOW TO GET AROUND: I have discovered a new method of finding my way about in Japan. On arrival at a city I purchase its favorite pack of picture postcards, show them to the nearest stranger—all Japanese are polite—and he directs me. It is far better than going to information bureaux that don't inform.

God has given the Nordic quick wit and intelligence; he is expected to use it, and has to in Japan. The devil has given the Nordic a violent temper; he is a fool if he uses that in Japan. The Japanese will not change; the Nordic can be adaptable; and he must be in Japan to get on; he is foolish to expect to understand—he must sense, and act. Things are so in Japan; no one knows why, often the Japanese least of all, but they are so, and there is no changing them. Just remember that and you may travel throughout the strange Empire and be, if not happy, at least content, and that is all the Japanese ever expect for themselves—contentment in this life, its counterpart, "Nirvana," in the next.

God has not made the Nordic mind so that it desires either of these; it always craves more, and more. You will get less and less in Japan and the sooner you make yourself content with that lot the sooner you fit in with a people your Nordic mind will never understand, but which your human heart can love. These Japanese are a good, kindly people, but, alas, often as aggravating as the Nordic himself. Well, God has given us one world to live in; let us make the best of it. Japan is one of its most beautiful portions.

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INFORMATION (?) BUREAUX: I have no criticism to make of the Japan Government Tourist Bureaux throughout Japan except to suggest that when there is no one to give "Information" in the language of the sign in English then, for heaven's sake, take down the sign that invariably spoils the temper of the foreigner who, deceived by it, is made to feel that he has made an ass of himself or has been made an ass of.

An honest "No English spoken here" or even "A very little English spoken here" would be such a blessing to the foreigner. I trust him to use his wits. He will find a way, for the Japanese are, superficially at least, the most polite people, and it is only a superficial acquaintance you wish with guides in the embryo. The foreigner will invent a way to get on if he only knows the facts, but to dash up to an "Information Bureau," ask a simple question, and have a blank face look at you, and an "Uh" fired at you is disconcerting and often aggravating to a point of inducing swear words.

Abolish the sign, "Information." It is a lie; it insults the intelligence of the foreigner, and that is an insult he does not forgive, for he is just as conceited as the Japanese is vain.

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HEARN; MATSUE: My Japanese students who read English but speak not a word of it came into my car as we were approaching Matsue, where for so long Lafcadio Hearn taught school and lived with his Japanese wife. His Eurasian son is now, I understand, teaching English in a middle school. Now, how could Hearn express himself at the end of his life as understanding the Japanese less than he did during the first year of his residence in Japan? I have heard Americans who have rounded a half century in Japan, some of them born in the Orient, express the same view and sentiment. I have ceased to try, or to attempt, to understand the Japanese. I like them; that is all, and I let it go at that. The common people are as charming and delightful as the feudal lords are charming and condescending, but I don't like to have anyone condescend to meet me or talk with me. I have talked with presidents and premiers the Pacific Ocean around on equal terms, and I will not meet any man on any other terms, but then I am a Nordic and bow down to no one. But I do respect the students of every race. May they lead us to better things and higher achievement!

Lafcadio Hearn had a right to be despondent if he lived or existed in Matsue for years—I found two hours enough. The guidebook hints at Venice-like canals. Well, I have seen them and shall defer my visit to Venice, for fear of disillusionment. There are canals and canals.

Matsue from the railway station is anything but attractive, but in the far distance on a crested hill is a gem of a castle that beckons to you. I obeyed the call and tramped for a mile or so through a very ordinary Japanese city until I crossed the neck of the lake on which Matsue is situated and approached the really attractive portion of the city, crowned by the Castle of Matsue.

Matsue Castle is real; it is perfect; it is small and a gem among the castles of Japan, situated on a hill, the base of which is built up with immense square stones, that rise from a surrounding moat. In the gloaming I climbed the great broad roadway, passed the incongruous palatial modern prefectural building, and stood in the beautiful courtyard, in the corner of which is this gem of a castle. I was quite satisfied with my tramp and quite satisfied to return to the railway station and entrain for Taisha, an hour or so away, where the great shrines of Izumo are to be seen. I walked to the castle, partly because I did not know which of the score of motor-busses at the railway to take, partly because it is my rule, by walking, to orient myself and so remember a town. I walked back because I wished to discover if I had oriented myself and found I had, and that was a satisfaction; we are all a little conceited, under the skin, over our pet attainments.

I presume I passed the middle school where Lafcadio Hearn taught English in the nineties. I certainly bought photo postcards of Hearn, his Matsue home and of the schoolhouse where he taught. The Castle of Matsue will always stand out in my remembrance, but not the city. It was a pleasant hour's walk, however, and well worth taking.

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JAPANESE MENTALITY: A friend of mine in describing the mentality of the Oriental and of the Occidental likened the Japanese to a slow-going but massive and irresistible freight train, loaded with a single idea —bent only on landing it at its destination. The Englishman he likened (he was an Englishman) to the ordinary passenger train, not too fast, but just a safe, sane, conservative local, laden with a few heavy ideas, that reached their destination in time. The American he likened to the stream-lined lightning express train, all sorts of ideas tumbled aboard in confusion but bound to land them there, at the end of the line, at least ahead of time.

He might have added that, in all human certainty, each in time, long or short, would have its wreck. The law of averages might land the American express in a heap early in the game, the conservative British train much, much later (if at all in the opinion of the Britisher) and the Japanese freight train last, if at all, but imagine the total crash that heavy freight train might make, a complete wreck, little but matchwood left; the American express almost as bad in this wreck, and the conservative British train least of all unless it happened to be run into by the Japanese freight or the American express—and then! Well, you know it might happen that way. You never can tell. Something has already hit the American express real hard.

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SCENIC INTOXICATION: We are approaching now the sea of islands. From the car windows there are islets everywhere, from the tiny cones crowned with single pines and with outstanding *torii* at their base, to distant isles far away. It is still a glorious coast with only two drawbacks—tunnels, too many of them, and "fly cops." There is one on the train. He tells the conductor to examine my ticket again and report. He sits a few feet off and imagines he is unobserved. This sort of thing would not fool a child in America.

New Zealand boasts of her bay of islands. Well, there are numbers of bays of islands on this uncharted coast of southwestern Japan. My guidebook mentioned sixty tunnels in a given area; it is conservative for once. In between tunnels this country is exquisite, a newly shaped bay and new forms of isles and islets after every tunnel, and the tunnels are almost continuous.

For the life of me, I cannot understand why this area of Japan is so neglected by the guidebook and the tourist bureaux. In any other land it would be advertised as a modern paradise, and it is. Nowhere on the coast of Japan are there so many enticing islands to bewilder the eye and mind, while on the land side the train passage is a visual delight, every mile of it. The waters are taking on a wonderful and deeper blue, and the lakes or lagoons along the coast are becoming more numerous and even more beautiful, if that were possible. Why this land is neglected, I cannot understand. It is a bit of Puget Sound set down in Japan. The more I see of scenic Japan the more I realize I shall never see and explore it all in this life—and I regret it.

It was sunset before we reached Shimonoseki. The route around the southern tip of Hondo, Japan's main island, is well worth taking. All in all I much prefer travel on the west coast of Japan along the Japan Sea than along the Pacific coast side. The Inland Sea must be seen from aboard ship really to be appreciated. This Japan Sea from the car window has been a full week or more of constant delight, ever a changing panorama without compare the world over.

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AMERICAN-BORN JAPANESE: (Speaking of Japanese born in Hawaii who exile themselves to the land of their ancestors—and don't like it. Specifically a woman guide for a bus company.) * * * Now all over Japan such use could be made of poor returned devils from Hawaii who are pining their lives away to return to the land of sunshine and friendship. This girl, or woman, really speaks English; she thinks in English, and with Americans is an American.

This bus company (may it prosper and its busses increase), puts its force of ten girl-guides under her, and she is hostess to the foreigners and, oh, how she delights to meet and chat with them, and how quickly they learn to like her. In nearly forty days of travel in Japan this is the first Japanese I have met who speaks and *thinks* in my language, and yet the woods of Japan are full of such returned expatriated exiles from Hawaii.

If only the Japanese railways and tourist bureaux would realize that it is such as these who can win the foreigner to longer stays in Japan and to become emissaries of friendship between Japan and the whole world. After a few struggles with the "Information" bureaux at the railway stations, one is apt just to give up and sigh, but here is a ray of hope. Will Japan ever utilize it? I fear, never.

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CONCLUSION: The journey is over; the forty days and nights abroad in little-known Japan have come to an end. I would willingly begin tomorrow and do it all over again, even over exactly the same route, for I just begin to know now how much I might have seen and did not. I left out so many scenes that I hope some day to visit. Reading books on Japan now gives me a thrill and a pleasure it never did before.

Back in the comfortable Imperial Hotel (in Tokyo) with my night lamp glowing by my bedside, I find that far into the night even the guidebook yields me fascinating hours. For now I begin to understand—no, not Japan, nor the Japanese. I shall never attempt to do that; but I understand that I still love Japan and like her people and always shall, and until life's journey is over and we cease dreaming, that is the best that can be hoped for. What more to desire? Come to Japan yourself and see what I have seen.

And now we come to the end of the book. Terry states in his guidebook that there are 72,000 Buddhist temples in Japan and about 200,000 Shinto shrines with 30,000,000 Buddhist adherents and about 20,000,000 Shintoists, so I don't understand why there are, according to Terry, but 52,000 Buddhist priests and only 16,000 Shinto shrine attendants.

It is interesting, reading the guidebook. Now I have seen something of Japan. I know how much the guidebooks leave out, and how wonderfully verbose they can be on subjects that do not really matter at all.

I have found no guidebook that states how many castles there were and are in Japan, nor how many pagodas, both of which interest me far more than the quarter of a million temples and shrines. I can visit all the castles and pagodas in Japan. I doubt if there is more than a scant baker's dozen of each, but I am going to find out. As for the temples and shrines, I leave that with a few outstanding exceptions to the myriad of Japanese pilgrims who spend and enjoy most of their lives visiting holy places, and I really envy them.

The perfect guidebook of Japan has yet to be written. There are two on the market today. Terry's voluminous and intensely interesting book, after you have seen Japan, is sadly out of date. And the one on which the government railways have tried their hand, an official railway guide of Japan, is sadly inadequate, yet by having both guidebooks at hand you may get somewhere near the truth about travel in Japan. Terry does enthuse; it is dynamic; that is something. The government railway guidebook does not; it is static. That is a defect to the dynamic Nordic, for if there is any country worth enthusing over, it is Japan, so far as actual travel is concerned.

The wondrous voyage, forty days of railway travel and forty nights in Japanese inns, is over and I am reading both guidebooks with avidity, but neither satisfies my longing for knowledge of the real and numerous wonder sights of travel in Japan. The race of Griffis, Chamberlains, Skidmores and Hearns seems to have died out and no one to take their places. Yet Japan is the most tourist-tempting country in all the world today. She needs a new historian, and none in sight.

Let's Go to the Desert

By J. E. MORHARDT, JR.

On Staff of Sunset Magazine

MANY of us will go camping in California deserts this winter. Many of us who would like to go won't; fearing such trifles as sand, thirst, tarantulas, snakes, heat, lack of scenery and a few other minor details. Perhaps, at being shown the ease of such an adventure, others will pluck up courage to explore more of California.

We in this state have the desert right at our doorstep; in fact, especially in the south, we often have it in our lap. It extends along the entire eastern edge of the state, enabling us to sample the entire range of weather and forestation in a single day. Most of us stay as far away from it as possible, only venturing out when business demands; traversing it as a necessary evil in getting elsewhere.

We have been brought up to imagine the desert hostile, sun-baked, treacherous; full of skeletons and poisonous wells. We see the pioneers struggling through the deep sand, dying from thirst, wandering from mirage to mirage in a lost hell of heat. We cross it by train, complaining at the fine dust which sifts into everything. We expect trees, people, buildings; life as we find it elsewhere. We must confess ourselves frightened at the thought of spending a single night in its wilderness. So, having completely deluded ourselves, we stay away.

Some of our fears are true; some were true at one time; some were never true. We need a complete mental overhaul to appreciate our great western deserts.

To begin with, the desert is hot. Only a fool or a Navajo Indian would willingly spend a summer in its scorched sage valleys. But its range of temperature is greater than most of us realize. In winter the desert can be frightfully and appallingly cold. We have camped a week in Death Valley and not once been warm enough to remove our sweaters; and that at a time when Telescope Peak was snowless. No, that argument is out; to the wise the desert is seldom too hot. From October to March the weather is more often than not equable.

The nights are always cool in the winter. The first item on the prospective camper's list should be plenty of warm wraps and bedding. Then on getting into Death Valley and hearing the wind devils howling down out of the snow over the Panamints, you can cuddle up in bed under the wide reach of stars and enjoy it. When you get up in the morning with hoar frost all around you and a thin layer of ice on the water jug, you can put on a nice warm sweater and sing to the whole wide sweep of the Mojave desert; and starting out after packing, you can poke the cold mitts into driving gloves.

These things are necessary for desert camping in the winter, especially if you are in the high desert or near the mountains. You may be reduced to shirt sleeves in the daytime but you'll need ear muffs after dark.

Then there is the wild life. Many persons believe that tarantulas, centipedes, scorpions and Gila monsters are just hanging around the best camping spots eagerly awaiting customers. Maybe they are, but we've never seen them. Why, we've found more tarantulas on the Covina hills in a week than on the desert in ten years. Gila monsters are a curiosity in California and

Ghostly Joshua trees gaunt against a lemon sky . . . long gray-green sage valleys shafted with gold . . . range after range of cobalt, lavender, ultramarine mountains . . . peaks rose-pink above a veil of mist . . . the Painted Desert fragile as a dream . . . endless march of beauty.

not exceptionally dangerous, while scorpions and centipedes are as prevalent in the average Arizona home as in the sagebrush. As for rattlesnakes, you see them occasionally, but they are not interested in you, so why worry? In fact the whole of the available carnivora, insectivora, and reptilia are much more afraid of you than vice versa. Here are the main injunctions.

Don't bother about a hair rope. It went out with the free lunch. If a rattler or any kind of a snake (they're all rattlers in the dark) tries to crawl into bed with you, let him, and give him a good chance to go to sleep before you decamp. It really does happen that snakes looking for warmth crawl inside blankets, but gracious, we've never even seen one; and for that matter I'd much rather have a snake than a second-story man, with the odds well up to see a burglar before you would ever see a snake. The only animal you are likely to see is the kangaroo mouse dancing on the sand in the moonlight or hopping across the road in front of the car. These dainty little fellows and many, many rabbits will keep you company wherever you go.

It may be well to shake out your boots and clothing carefully when you arise in the morning, to dislodge any of our little animal friends from ants on up. It's much better to leave your clothes in a valise or in the car, as there is often a very heavy dew.

While we are on the subject of sleeping it might be well to add a word on method and equipment. Sleeping bags of any sort are vastly superior to loose bed rolls, however pinned up. Those with side zippers are most easily arranged. Moreover, it takes fewer blankets with a sleeping bag.

If you want to sleep late don't face the east. The rising sun will wake you more quickly and efficiently than any alarm clock. Probably, though, for the first few nights at least, you'll be watching the dawn come up out of a cold blue horizon and realizing what you've been missing all your life. Dawn on the desert is a miracle. From the time the eastern sky pales to turquoise till the edge of the sun mounts the blue mesa there is no lying back for sleep. Ghostly Joshua trees, gaunt against a lemon yellow sky; long gray-green sage valleys shafted with gold; range after range of cobalt, lavender, ultramarine mountains; red Nevada hills; the San Francisco peaks rose-pink above a veil of mist; the Painted Desert fragile as a dream; the gigantic buttresses of the Sierra Nevada lifting blue shoulders into the dawn. An endless march of beauty almost beyond our conception.

Cots and mattresses for those who like luxury, ground for the hardier ones. Mesquite branches or even white sage will help smooth out impossible spots. Take care to lay the stems toward the foot and build from the top down. Do not forget your hip holes, especially in sand. Lie down where you expect to put your bed and make a mark where your hip line is. Then dig a little trench across, having the edge nearest the feet lower. Test it until it conforms to your ideas of comfort and you will be less likely to awaken in the morning with a stiff neck.

If you can, sleep with your head away from the wind. It is likely to get down the back of your neck at all odds. Don't use a tent unless you have to, and I can think of only two reasons for such urgency. Rain . . . and that's out —or privacy, which suggests this: get out by yourself, away from auto camps. The desert is big enough for the most modest, and no adequate appreciation of it can be gained through herding with a mob under a tent in an auto camp.

Don't camp too near cholla cactus. Any cactus is bad enough, but cholla will get up and walk miles out of its way to help give you an adequate reception. You can't see the dead spines on the ground but they're there, and we remember dolefully plucking minute barbs by the hour out of blankets laid down quite a distance from the nearest visible bush. You never get all of them, and they're constantly poking into you. They will work through the casing of a tire in short order, and if left in the skin fester promptly. However, there is not

nearly so much cactus in the desert as most persons believe, and a small amount of vigilance will serve to avert any mishaps.

Don't put your beds down until you are ready to use them, as they will collect sand, dirt, and other things.

Don't put your beds where the smoke from the fire will asphyxiate you. At times this is impossible to prevent because of numberless changes in the wind, but the prevailing direction is usually down canyon at night, cold air from the mountains coming down to take the place of the warm, rising desert air.

Keep the head of your bed higher than the foot, and calculate your slope, if any, with enough accuracy so that you won't come to in the morning more than ten feet from where you started.

Don't camp near a shale or rock slide. We have had small avalanches dumped into our laps, frightening us most to death, when some small animal started a pebble up above. Such things of course always occur when you're asleep.

Be somewhat careful about choosing creek beds to sleep in. Desert cloudbursts, though rare, have been known to annihilate all life under a wall of rock and water so suddenly as to make escape impossible.

Don't forget to gather enough wood for your campfire before dark. Wood is sufficiently hard to find in the daytime on the desert without trying to locate it at night. It is well to remember that much desert growth will burn even when green. We have only once been at a loss for sufficient tinder. There is usually dead mesquite handy. You may leave your fire going in the desert after you retire, as there is no chance of its burning anything except possibly your toes.

Dry camping on the desert is the rule, not the exception. Carry enough water to see you through any emergency.

Extra gas and oil are essential. Sometimes you will, as we did, come to a town that looked great on the map only to find not only no gas but no inhabitants.

Each to his own taste in food and cooking. If the weather is cold take soup. If the weather is hot take oranges. In between the two suit yourself. We incline to canned ham and hard whole wheat crackers with a little candy for dessert. In winter, butter will keep nicely even though the day is pretty warm. If you like Mexican tortillas buy a bushel and forget the bread, which becomes stale very quickly in the dry atmosphere. Take along plenty.

As to driving. Any good driver can be assured of safety if he follows Auto Club signs and remembers to check his gas, oil, water and tires. One soon becomes accustomed to the roads, which are really not so bad as represented. Up to fifty miles an hour you are quite safe, but don't go off day dreaming and think you are on good road again, for every two hundred yards or so you'll hit a washout or a bump or a patch of rocky ground. Desert driving develops your imagination, vocabulary and ingenuity. Inflate your tires a little below average if the weather is warm to allow for expansion. Don't forget to water your battery, as desert weather dries it out.

Stay on the road as much as possible. It is very difficult to tell whether the ground at the side is too soft for traction or not. Don't go into a crooked road from which you may have to back out.

These few hints do not cover the field but will make it decidedly easier for anyone unaccustomed to desert driving. Desert roads lead to more beauty than any of us realize, and any camper who neglects to try the wide open spaces is missing half his opportunity. Don't forget that the desert in spring is a flower garden brighter than heaven itself and that at any time of the year it is surpassingly beautiful and fascinating. Make a trip to the desert.

Don Jose de Basco y Vargas . . . Governor appointed in 1778 . . . went so far as to offer a premium to any and all who would take up cotton cultivation . . . only half-hearted trials were undertaken . . . decisive results never obtained . . . tomorrow was always another day!

Cotton in the Philippines

By H. F. SCHUNEMANN

On Staff of the Philippine Magazine

THERE is a strong tendency evident in many countries in Asia to turn to the production within their own boundaries of such agricultural commodities as stand a reasonable chance for commercial success. The chief stimulus to such efforts is the desire to increase exports and decrease imports, and underlying this is the determination to develop existing home industries or to build up new ones. Many of such experiments are doomed to failure—the fervent wish that things could be done being father to the belief in ultimate success and dimming reason, but in other cases they are astoundingly successful.

It is interesting to observe how, one after another, many of the plants cultivated in the western hemisphere for western needs have gravitated toward the East, where the production has proved to be cheaper and very often better. Tobacco was one of the first to take the road. Coffee, sugar, quina, rubber, followed. The success of their cultivation in the East is well known.

Of late, cotton and the oil palm have started out, and it will not be long before both are soundly established in the Eastern world. Cotton will assuredly spread the most successfully. It is one of the most hardy and adaptable of all plants. It is found in almost all tropical and subtropical countries, and once it is established in the East, amongst agricultural populations, millions will turn to this clean, easy, joyful, and profitable crop. That the East will be able to produce it cheaper, and that non-cotton-producing countries will buy it where it is cheapest, may be taken for granted.

Cotton will help to balance the scale between East and West. The riches the West has taken out of the East for centuries it will have to repay in the coming years, and a good part of it will be for cotton. There is some consolation for the West in that the East will need more and more Western machinery.

As for cotton, the question of immediate interest is which of the Eastern countries will get a start before the others. As a matter of fact, cotton, one of the most useful of all cultivated plants, was first grown in the East. It

was grown in the Indian peninsula for the home needs of the population for many centuries, and up to a century ago Indian cloth was found in all the principal markets of the world. But Indian cotton was squeezed to the wall in the early part of the last century by British machine-manufactured goods spun from American-grown fiber, and the result was disastrous to India. Of late, however, cotton in India is staging a come-back, and the crop is rapidly retrieving its former position. The growing and spinning and weaving of cotton is advancing with leaps and bounds, but to the growing there will soon be an end, as land for cotton-cultivation and, for that matter, any land, is becoming scarce and urgently needed for growing food crops for India's three hundred and fifty million people.

Cotton is one of the most widely used commodities in the world. It is used for countless purposes every day the year around, the world over, by people ranging in culture from cannibalistic to civilized. Cotton has made many countries rich. Formerly wealthy India, when forced to abandon its cotton industry, was pauperized. The United States drew its primary agricultural wealth from cotton cultivation and thus laid the foundations for its present enormous wealth. Egypt a century ago was in a state of semi-starvation and rags, but worked itself up with cotton to its present position, a country with a soundly established gold standard for its currency and with a generally prosperous population.

The main three producing centers for cotton at the present time are the United States, Egypt and the Upper Sudan, and the central provinces of India. The United States produces some 15,000,000 bales of lint cotton a year, more or less. Some 8,000,000 or 9,000,000 bales are used for home consumption and for export in the form of finished goods to various parts of the world. The rest of the raw product is

Rice . . . means wallowing for weeks in flooded, muddy, unhealthful fields . . a pauper's crop . . . raised extensively only in countries with low standards of living . . . in harvest season men, women, children must work long hours.

shipped to other parts of the world, principally Europe and the Far East.

Egypt grows several varieties of cotton because of its peculiarly varied soil and climatic conditions, and holds a unique position in the cotton-consuming markets of the world. It produces the best—the longest and strongest—fiber, and consequently realizes the highest prices. The varieties were developed in the country after the industry was set going, although cotton has been grown there sporadically since time immemorial. It took the far-sighted and energetic Ismael Pasha to start the industry on its way, and it has been successful beyond his wildest dreams. The country's present wealth is almost solely due to cotton. The wealth created by cotton and the revenues derived from the cotton industry by the government, keep the country fairly well off even during these times of depression.

India, as has been said, is the oldest of all cotton-producing countries. After the cultivation of cotton there had been killed by the Lancashire interests, Britsh politicians, desiring to be less dependent upon United States cotton, set the cultivation of cotton going again in India. But cotton-growing was followed up by cotton-spinning, and slowly but persistently both have expanded. Gradually, the old, short, Indian variety has been improved until the staple demands more and more attention in the world markets.

Countries and continents are awakening rapidly to the importance of where the 20,000,000 bales of cotton used by the world each year are to be produced. Wherever there exists the slightest chance that cotton might be grown, experiments are being undertaken. But let it be remembered that almost anything can be grown in a

On the other hand . . . cotton . . . a clean, easy, joyful and profitable crop . . . men, women, children take to it naturally . . . cotton harvest time is singing time.

flower-pot, and that it has taken cotton-growing countries many decades to establish their cultivations and that they are not just going to give them up for the asking.

* * *

IN THE PHILIPPINES the cotton plant has probably existed from very ancient times and it is found sporadically in many parts of the country, sometimes as an ornamental plant and often in small lots for the growing of staple. That a plant of such tremendous importance has received so little attention can be called nothing less than neglectful. The Spaniards, however, did recognize the importance of the plant as early as the middle of the eighteenth century, and Don José de Basco y Vargas, one of the most energetic and far-sighted governors of the Philippines, appointed in 1778, gave it due importance in his "Plan General Económico." He even went so far as to offer a premium to any and all who would take up cotton cultivation, but only half-hearted trials were undertaken, then, or since, and decisive results have apparently never been obtained. Today we find only a small production of fiber solely for local use.

That the cotton plant has grown here for centuries is a fact, and any indigenous plant can often be developed into a crop plant worth cultivating. The latitude of the Philippines is the same as that of the famous "Sea Islands" of the West Indies, where the first commercial cotton in the Western hemisphere was raised for what became one of the West's chief industries. The best cotton ever grown, the best-paid staple, with the longest and strongest fibers, came from these West Indian islands. The Philippines, too, is in the same latitude as the world's oldest cotton-growing region, and today Asia's foremost cotton-growing center—the central provinces of India.

We have in the Philippines pronounced wet and dry seasons—a rainy season long enough for the growth of the plant, and a dry season long enough for the ripening of the bolls and the picking of the matured cotton. The Philippines, too, has virgin soil in abundance. And last, but not least, the population is agricultural by inclination. Diseases and pests would probably show themselves, but these could be attended to as elsewhere, and, furthermore, new crops rarely suffer so much from diseases and pests as do older crops. Another temporary advantage would be the fact that Philippine soils would probably not need fertilizing for some time to come, all of which would keep the costs down.

Comparing cotton cultivation with the cultivation of the principal Philippine crop — rice — decided advantages can be claimed for cotton. A farmer naturally thinks of living before he thinks of profits, and grows his food supply before he grows crops for sale. Rice, however, although a necessary food-crop, may well be called a pauper's crop, and it is raised extensively only in countries with low standards of living. Raising rice means wallowing for weeks in flooded, muddy, unhealthful fields. In the harvest season, men, women, and children, must work long hours getting the comparatively heavy product into the granaries.

Preparation of the soil for cotton, on the other hand, is clean and comparatively light, the planting is easy, the cultivation is not laborious, and then follow weeks of cheerful watching of the growing fields. Cotton harvest time is singing time. Men, women, and children take to it naturally. There was a reason for the expansion of cotton plantations in the United States year after year. Farming populations everywhere are conservative, but once prove to a farmer that he can make larger profits in an easier way, and all his objections fade away.

Summing up the agricultural view, it would seem that there is a good chance that cotton could be grown with success in the Philippines and that it is worth giving it a fair trial.

From the commercial point of view, to begin to talk immediately of cotton exports would be premature. It would take a good many years to grow enough

cotton locally to spin even the thread used by the population, let alone the cotton cloth. But cotton grown here today could be spun here tomorrow, and could be sold here, too.

Cotton growing and spinning in the Philippines might meet with certain opposition from cotton growers and manufacturers in the United States, but there is no way of blocking the natural run of events. Spain and Spanish America, with all their power, could not prevent quina from shifting from West to East. Rubber came East against all of Brazil's opposition. Unnatural monopolies must inevitably be broken up. But even if the Philippines went in for cotton growing with all its might, it would take many years before production would reach the first hundred thousand bales, and although this amount would mean a lot to the Philippines, it would mean little as compared with the millions of bales produced in the United States.

Commercial success depends largely on cost of production. In regard to cotton, this depends chiefly on the cost of labor, and next in importance come the cost of land, the cost of transportation, and the cost of fertilization. Minor items, usually, are losses due to diseases and insect pests. It does not require a mathematician to figure out that the advantages are chiefly on our side. We may again conclude that from the commercial, as well as the agricultural point of view, cotton-growing in the Philippines is decidedly worth a trial.

Future production of Philippine cotton above home needs would not need to go far for promising markets. China and Japan would be only too pleased to take up every bale that the Philippines would want to sell, if offered at a fraction of a centavo less than that asked by producers farther away. Both China and Japan do produce some cotton of their own, but they never will be able to produce anything near enough for their own use, not to mention their ever-increasing need of raw cotton for their exports of finished cotton goods. And then there is all of non-cotton-producing Europe, with its hundreds of millions of people just waiting to get their socks, singlets, undies, and petticoats as cheap as they can possibly get them.

In connection with the cultivation of cotton, various industries are generally developed. Ginning the seed-cotton into lint cotton and baling it is the first stage of the industrial process. The pressing of cottonseeds for oil follows. This is sold as vegetable lard. The residue of the seeds is pressed into oilcake that finds ready sale as a valuable animal fodder. Cotton stalks have been tried for the manufacture of cellulose and paper, this opening further prospects. The spinning process has already been started in the Philippines and will gradually develop by itself.

The government has for some time tried to encourage a diversification of crops. One or the other of a number of cultivated crops always turns out satisfactory, even in years of disaster or depression. Depression can best be fought with initiative. A population engaged in creative agriculture, satisfied with its work and by the gains derived therefrom, is the backbone of a stable government.

We can come to but one conclusion —cotton seems well worth a real trial in the Philippines. Sound practical experiments should be carried out in various parts of the Islands. These experiments should have the assistance of the government and of far-sighted citizens who can afford to disregard immediate profits. Systematic attention should be given to the various plantations, and the selection of clean-bred seed should be the next step. The whole should be followed up by scientific observation and report. A combination of initiative, hard, practical work, and scientific supervision is what is needed. The game assuredly seems worth the candle.

China lives within walls . . . separated by walls . . . the long streets lined with walls . . . and gates, gates, gates!

Streets of Fur

By CLARA L. DAWSON

WINTER in Northern China is biting cold, and to us just coming from the tropical Philippines with our thinned blood, is like going into a refrigerator. My Chinese coolie, who was the manpower to the native rickshaw I was riding in, very smilingly informed me, "Not so cold, Missy, only three piece cold now," which meant that he had been sewed into three suits of clothes, one on top of the other. I gave thought as to how many the top notch of the winter would be, and when he started to unravel them, how long would the first one have been on. But this is a small matter to these happy-go-lucky coolies, and in the bitter cold they sit day and night on the street in front of the hotel anxiously waiting for customers.

Hotel des Wagon-Lits is Peiping's finest, although another hotel has been built, perhaps a little more modern but no better. The Wagon-Lits is a famous rendezvous for the smart international visitors, and is very pretentious with its old English customs that have adapted themselves to a harmonious setting in China.

It was quite late in the evening when we arrived in Peiping, and the cold, clear night brought out millions of stars which seemed to sparkle brighter than ever with the reflection of a white snow-covered earth before us. Peiping was sleeping now, and the streets looked dark and lonely as we rode along through innumerable archways and gateways in various walls. China lives within walls and every section is separated by walls. All the temples and palaces are within walls. The Legation quarters are all walled, and the different embassies within are also walled. Walls line the residential

streets, and people of consequence live within compounds.

The Great Wall of China, with which we are all familiar, is 45 feet high, 50 feet thick at the base, and the top as wide as a thoroughfare. China has famously expressed her hand labor in this remarkable achievement, the largest and greatest of anything of its kind in all the world. Having this knowledge, it does not seem odd to find more walls inside this enormous structure. Of course, the object of all these walls is protection against warfare. China, with her large territory and great population, has always at some time, in some part, experienced upheaval and unrest.

After being comfortably located in our spacious rooms at the hotel, the desire struck me for a cup of hot tea. Sending for a boy, my request was made known, but the answer was that number one boy says, "Fire have finished, no got tea." Pidgin English is, to say the least, very definite and expressive.

At whatever hour one wishes to be awakened, a little Chinese boy arrives at one's door with tea and toast, and notifies one that it is time to arise, and that breakfast will be served downstairs when one is ready. With huge tile baths and every convenience accessible, one indulges in the luxury of a leisurely ablution and arrives at the dining room about ten o'clock for breakfast. Everything is late in the Orient. Luncheon at two o'clock, dinner about nine. The hustle and bustle and fast-speeding hours of a work-a-day life in the United States have never been injected into the veins of the Orient—there is time for everything here, and what one cannot accomplish, perhaps another will.

Everyone is bedecked with furs. The Chinese of the richer class have their native coats lined with sumptuous furs; men with sable-lined coats are not at all uncommon. Squirrel and rabbit are used in abundance, especially for the American trade, which seems to have made a craze of lining fancy embroidered Mandarin coats with white rabbit. The real old, handsomely embroidered Mandarin coat with its delicate Peking stitch, is almost a thing of the past. Needlework tediously done by the best of experts for display to critical eyes at court functions is sliding into a memory, and now the commercialism of a hasty imitation is flooding the shops. Long stitches, coarser designs, and new materials are now making up the greater part of the garment, with large cuffs and borders rich with work of the old. Coats which are too worn to sell are being stripped of the better parts, which are used to decorate the new coats, thus lending a little glamour of the old Mandarin days with their elaborate settings. Soon this will also be gone, as the demand for Mandarin coats has so flooded China that her resources of old are no longer to be found.

Long fur coats of leopard with handsome red fox collars and cuffs are quite colorful in their appearance, flashing around the hotel, worn by stunning-looking foreign women. Squirrel coats are also doing their best trying to run against opposition in the swanky parade of fashion. White fox, which is always lovely, is worn lavishly.

Soon my interest led me to ask where all these lovely things could be found, and it was then I learned about Fur Street. If I followed the directions quoted, I would find myself amidst "Streets of Fur in China."

The first thing to learn and thoroughly understand was the meaning of "lose face." We were to realize the solid permanency of this expression to the Chinese people, and how important it is to save one's face. The Chinese are peculiarly receptive on superstitions, and if one loses one's face in China, one is practically an outcast. It seems that the price of an article is never at a set value. The Chinese find great entertainment in bargaining with the customer, and if he is clever enough to get more than expected value, that is his gain, but if you take him down to a bargain price, then you are the clever winner. However, be it as it may be, when once the customer names a price, that price he must pay. One can al-

Outward bound for more fur. Note the young camel driver bringing up the rear, eyes left where feminine pulchitrude passes, evidently storing up impressions that he hopes will last through a hard Mongolian winter. Peiping walls, once so effective against invaders with long bow and lance, magnificently decorative in these days of flying death. Walls endure, change marches on.

Bundled-up natives crowded the streets . . . active despite the sartorial fortification against "ten piece cold" . . . all seemed very busy.

ways raise a price to gain the purchase but can never go under the price mentioned. If so, one "loses face." Should this occur, the Chinese merchant will spread the news as fast as fire in dry grass; so quickly in fact that it will reach the hotel before you do. Merchants will refrain from selling to you, coolies will stand back and retard their services; it will be as though one had committed a disgraceful act, and so it is to the Chinese.

Taking our rickshaws we start for Fur Street, and as we leave the hotel, we soon find ourselves in wide open spaces. The distances are usually far in Peiping, and the places of interest rather scattered. There are many large thoroughfares, giving open appearance quite unusual for a Chinese city. However, as soon as one leaves the main thoroughfare, one soon finds one's self in a network of little side streets.

Sauntering around these narrow side streets, we observe the fascinating exhibits of Brass Street, Lantern Street, and so on, each one replete with wares of the street's name. It was hard to concentrate on what we started for, but Fur Street soon loomed and here shop after shop, covering the entire street's length, was heavily laden with furs.

The afternoon was cold and the sunshine created but slight warmth in the icy air; hardened snow and slippery ice confronted us everywhere, winter had laid its blanket upon Peiping. Bundled-up natives crowded the streets; there was plenty of activity despite the cold. They all seemed very busy, going and coming, attending their occupations upon which their livelihood depended. There were grunts from our rickshaw boys as they jostled against others in the narrow pathway. Chinese stopped with curiosity to look us over. There were coolies carrying heavy boxes that swung from bamboo poles. Most everything is manpower in China, and they usually chant some sort of a sing-song; this gives a noisy buzzing atmosphere, but it seems to lighten the coolie's labor.

The vanity of human beings revealed itself within us; we were obsessed with the idea of decorating ourselves in flattering furs. The kind of furs to select and at which shop among this great assortment where we were going to do our purchasing were gripping problems.

Furs in China are very moderately priced, but some are not cured as well as others; also they vary greatly in quality. Some of the furs have a dry, brittle skin, with many flaws and bald spots; holes are frequently found, and the dry hide tears like paper. There are plenty of fine furs to be had in China, but experience in selecting is essential, because when they are once made up, the outward appearance is very lovely. Of course, there are reliable quality fur shops, but these places are expensive.

We shopped quite extravagantly, purchasing our furs in quantity, and each little shop used the old Chinese adding system. This curious rack consists of small wooden balls, upon upright sticks, fastened into a solid frame, and is in two divisions. The upper has two balls, valued at five each, on each of its eleven sticks; the corresponding lower sticks have five balls with the value of one each. Units up to five are reckoned below, above five on top. The speed with which these balls fly up and down in this amazing system of calculation is simply startling. Without this curious affair, the abacus, it would be practically impossible for shopmen to make out a bill. The Chinese are noted for their rapidity and accuracy in arithmetic, and when trained by white employers in their methods they become excellent bookkeepers and accountants. However, the Chinese usually does what his forefathers have done, and so the stick and ball system prevails almost everywhere.

The banking system is another interesting subject. We are informed that all these little shops do their own banking. They dig a hole in the ground which is unknown to others, and there is placed the family fortune. No worry of banks folding up and walking out on them; they know what they have and where it is, and that's the essential thing. Bank books and interest are all too complicated—they do not appeal. After all, a bird in the hand is worth two in the bush.

It was hard to realize that these tiny streets which were so cold and icy would all be blistering hot in summer. One cannot buy so many furs on Fur Street in summer, because when summer comes many furs are packed away in camphor boxes and placed in coolers, so one must shop while the season is on.

Night was falling fast; the winter days here are always so short, and with the dusk little lights started to flicker here and there. Kerosene lamps, candle-lighted lanterns, the ancient illumination was prevalent everywhere. Then, like a swarm of glow worms, the little dangling lights of the rickshaws darted from place to place in the streets, and this strange, alluring scene held us with a tense inward excitement. There was more, always more, that we wanted to see in this far-away exotic place so different from our part of the world.

Back at the hotel we were only too eager to tell of our experiences and display our furs. The day's adventures furnished one of those occasions where the notes jotted down in the mental memory book will never fade. The mere sight of a white rabbit coat will always remind us of the vast quantity of them displayed in the shops on Fur Street, and in spite of any progressiveness that may come, there is no doubt that the Streets of Fur will always retain that flavor of the old world, always be there holding their distinctive charm.

Soviet Science in the Arctic*

By S. EXC. M. CONSTANTIN YOURENEFF
Russian Ambassador to Japan

I HAVE THE HONOR to give you some brief information concerning the scientific investigations of Soviet scientists and explorers in the Pacific Ocean, some of the seas of the Union, and particularly in the vast regions of the Polar Ocean. It is about 420 years ago that Europeans first reached the Pacific under the leadership of Balboa. Since then the Pacific has no longer been an unknown waste of water; other expeditions have followed, and in the course of centuries Europeans have become well acquainted with all parts of that great ocean.

Russians appeared on the shores of the Pacific in 1639, when Cossack Mosquitin's expedition reached the shores of the Okhotsk Sea. After that many other expeditions followed. Of these it is well to note Cossack Dejnev's expedition, which passed through the Bering Straits in 1648; the discovery of Kamchatka by Atlasoff in 1697; the discovery of the Kurile Islands by Antsiferoff and Cozirousky in 1711, and the great expedition of Bering in 1725-1743 during which the Bering Straits, Aleutian Islands and Bering Islands were discovered, and drawings were made of the shores of Okhotsk Sea, Kamchatka, Kurile Islands, and a part of the coast of Japan.

In the following centuries the Pacific Ocean was not forgotten, and many expeditions were organized, but it is only a few years ago that Soviet scientists have worked out a new and entirely different method of sea-exploring. It was the custom before to gather statistical and descriptive data, whereas now Soviet scientists have turned their attention to the physical, chemical and biological processes of the seas, and the application of these to the different needs of national economy and particularly to the construction and equipment of sea routes and the improvement of fishing and sea-animal hunting. During later years the most extensive explorations and particularly the explorations of the North Polar ocean were carried out by Soviet scientists, and during the last three years only, about a hundred expeditions were carried out on ships of the most modern and up-to-date construction. Fourteen Soviet seas and two oceans have thus been explored.

Dogs, long the mainstay of Arctic transport, are being superseded by the aero-sledge, as the horse by the motor car in other lands.

The famous cruise of the ice-breaker *Sibiryakoff* in 1932 is known the whole world over. The great polar ocean was crossed in a navigable season, and a new and also the shortest route between Europe and the Far East was established.

The whole world knows of Professor

* A talk before the Pan-Pacific Club of Tokyo, Balboa Day, September 25, 1934.

Ice-breakers couldn't "take it," so exploration now makes use of the airplane, whose swift course is always open to heavy planes and hard-boiled pilots.

Otto Schmidt's heroic expedition on board the *Cheluskin,* which crossed the Polar Ocean, but owing to adverse weather was stranded in the Bering Straits. The well-disciplined crew behaved bravely in the calamity, and the Soviet pilots, braving the elements, performed almost a miracle in saving not only the whole crew, but all the valuable scientific data obtained during the expedition.

While these expeditions are being carried out, other scientific work is constantly going on. Soviet experimental oceanographic laboratories have been established on a large scale. Professor Shuleikin of the Moscow Hydro-meteorological Institute has, after long experimentation, made extremely valuable discoveries in the circulation of tidal waves, the optical nature of sea water, and the warm interaction of hydrosphere with atmosphere. The miniature sea is confined within the walls of a laboratory; all the hollow cavities of the bottom, all the shoals, are in the minutest fashion engraved and carved in plaster. The model is set on a huge steel support, and an electric motor turns it round with a speed equalling the speed of the earth round its axis. The so-called sea is filled with water; a special stimulant made in the likeness of the sun and the moon draws the waves and they flow in much the same manner as do real sea waves in an ocean. A camera registers their movements. These movements are then made into diagrams, and thus the study of the laws of the movements of ocean waves, impossible under natural conditions, is being carried out. These arrangements have the most significant bearing on the life of the littoral and inner sea regions. For instance, the waves formed in the Atlantic Ocean stimulate the oscillation of the sea level and the tide on the shores of the Barents and White Seas reaches such a height that sometimes it is difficult for even large ocean liners to cope with them.

Up to now, science has been absolutely impotent as far as the sea was

They need their fur coats, socialite feminity does not, yet the slaughter goes on while jealous nations watch and ward.

concerned. It could not give any help to the polar navigators and coastal fishermen. The results of the latest Soviet investigations will be the property of thousands of peoples of all kinds—fishermen, navigators, constructors, and so on. A navigator going to sea will now receive the exact information as to where and when he is likely to meet an obstacle—he will know exactly the strength and the direction of the course in different places. Moreover the Soviet oceanography has not only made the tidal waves harmless but is now creating the possibility of accommodating the boundless power of the ocean tide for the use of human culture. The power of the waves is colossal. The transformation of this power into electric energy will give milliards of kilowatts of energy; it will give light, heat, and mechanical power. The great problem of the Arctical increase of the fishing industry forces the Soviet scientists to expand their investigations with regard to the different natures of sea water, such as its transparency, hue and color.

Light is just as important for the biological life of the ocean as it is for earthly vegetation. The biology of the sea is directly concerned with the degree of its illumination and the depth of the penetration of light into the sea. All these questions have been put on a scientific basis by Professor Shuleikin. Needless to say this is a great contribution to the cause of science. The penetration of oxygen into sea water, which is likewise most important for the successful development of the seas, has also been worked out.

The Gulf Stream with its milliards of tons of warm water goes a long way to bring warmth to the shores of the Soviet Union. It crosses the Atlantic, having its origin in the tropical Caribbean Sea. Because of the Gulf Stream, ports on the shores of Barents, White and Kara Seas are always open to navigation; vegetables grow in tundra, and fish breed in the warm waters of the Barents Sea. Because of this, Mourman, situated beyond the Arctic Circle, has a warmer climate than Vladivostok, which is situated in a latitude more southerly than that of Crimea. But the Gulf Stream is changeable; the compo-

sition of the acid and gas saturation is always changing, and on these changes navigation and fisheries depend. Fish go where there is food, and for the formation of food, light, oxygen and favorable temperature are necessary.

Soviet ichthyology has worked out a faultless scientific method of fishing. Maps are given to the fishing boats which show the exact location of fish at the time, and also the direction a shoal may take. Instructions are given with regard to the structure of fish shoals under different conditions, and the most efficient methods of fishing in each particular case. This achievement of Soviet science has set up a new problem, namely the problem of predicting for many years ahead the exact fishing capacity of the sea and the corresponding exploitation of it. The sea is always changing. Soviet oceanography is at present exploring the different changes of the Barents Sea.

It has been found that these changes are of a periodical nature, and that the fluctuations are more or less regular. Every three months, regardless of weather, an expedition starts, bound northward. It follows the Cola meridian and goes far out into the ice regions. In different depths temperatures are taken. The amounts of salt, organic matter and gases are also minutely defined. After this, the vessels go westward, following the Ward meridian to Bear Island, Spitzbergen, and the Franz-Joseph Archipelago.

It frequently happens that the Soviet vessels go far out of the bounds of Soviet seas into the Atlantic Ocean and the Greenland Sea. Many important discoveries are being made. A new, strong current has been discovered in the Greenland Sea. Scientific work in Barents Sea is done by two ships—the famous *Persey* which undertook more than a hundred Arctic cruises, and *Knippovich,* a ship equipped with both sails and motor, and which made many records in ice cruising, one of these being the circumnavigation of Franz-Joseph Island from the northern side by Professor Zuboff in 1932, when the possibility of navigation in the latitudes which used to be considered impassable was proved.

The sea has a most significant bearing on climate. The seas of the Soviet Far East are very cold, and the climate of the Far East is colder than that of European and American regions located in the same latitudes. The warm currents of the Pacific Ocean are so distributed that they do not reach the Soviet Okhotsk and Bering seas. The Kurosiwo, reaching the Japan Sea, goes eastward to Japan. Along the Maritime Province another current flows in an opposite direction which cools its shores during the summer. The chief obstacle to the circulation of tropical currents in the Okhotsk and Japan Seas is the Amur River. Because of the pressure of its waters the current from the South cannot pass, and moreover it blocks the Tartar Strait with sand and slime. The problem is to remove these obstacles, for then the climate of the Maritime Province, Saghalien and the shores of the Okhotsk and Japan Seas would be entirely different. Agriculture and stock raising would flourish, and the now sterile lands would be covered with flowers.

Only a short time ago Kamchatka, Okhotsk peninsula, the seas of Bering, Chukotsk, the Bering Straits and the Eastern-Siberian sea were just vast unknown ice deserts. Once a year only, a vessel went there. There was not a single lighthouse north of Petropavlovsk. But now one of the most dangerous sections of the sea route from the gulf of Corfu to the Dejnev Cape has been thoroughly explored by the Demin expedition.

Not only have the methods of scientific investigation changed under the Soviet Union, but the purposes of the work are now different. Expeditions are made not for the sake of abstract scientific problems, but for the sake of utilizing the natural resources of those vast regions for national economy.

Since 1928 ice-breaking steamers have come into use for expeditions into the Arctic regions. In 1929 the Sedoff expedition went out to construct the northernmost Arctic station in the

world, and in 1930 a Soviet expedition reached the North Land and left there four courageous men, under the command of Ushakoff, who spent the winter in that place and carried on scientific work.

However, it was found that ice-breakers were not sufficiently powerful for the struggle with nature. Large sea regions, covered with ice, could not be explored by them. It is only by means of aëroplanes that this can be done, and hence heavy aëroplanes began to be used, and they have proved invaluable in this work. For instance, the Kara Sea, which had previously been considered unnavigable, is now open for large ocean-going commercial ships.

Besides aëroplanes, an entirely new form of transport is now being used for Arctic expeditions. It is what may be called an aëro-sledge, and a new type of automobile. These new means of transport have been found to be far more efficient than the old way of using dogs.

The work of Arctic exploration is now done on an entirely different scale. Formerly only expeditions could be made, but now, with numerous polar stations, geographical and physical work is continuously being done.

Fifteen years ago there were only four wireless stations in the northern regions, with no polar station at all in the east. At present there are twenty-two polar stations in the Soviet Arctic, of which seven have been constructed during the last two years.

Under a special government decree "The Central Management of the Northern Sea Route" has been organized, with a view to including all the territories of this route in the general constructional campaign of the Union, and moreover the realization of its continuous operation. The United Arctic Institute works under this management.

The results of the activities of this Institute are as follows:

The Great Northern Sea Route has been discovered and crossed in one navigable season; this discovery is of course most significant, not only for the northern regions but the whole Union and the world in general.

The western section of the Northern sea route has been explored, and a map of the Northern part of the Kara Sea has been drawn, which before this had been just a white spot.

New islands have been discovered. The hydrological conditions of the Kara Sea have been explored, and particularly with regard to its currents.

The central sections of the northern route have been explored and a map has been made of the North Land with its numerous islands.

New polar stations have been established (in the Bay Tihaya, on the Island of Hooker, Franz-Joseph Land, on Novaya Zemlya Island, on the White Island, on the Cheluskin Cape, on the Sergei Kameneff Island, North Land, in the Tixi Bay, mouth of the Lena River, on the Sagastir Islands, on Bear Island, on the North Cape, and on Wellen). All these stations are equipped with radio which connects the Soviet boundaries with Finland, Norway and Alaska.

At the same time many important geological discoveries have been made. Oil has been found in the Northwick Bay, coal in the reservoir of the River Kolima and on the Chukotsk Peninsula. In Novaya Zemlya copper, zinc, and asbestos have been discovered, and on the Chukotsk Peninsula tin, copper, nickel, arsenic, etc.

From these brief data it is evident that the growth of Soviet scientific investigation has been tremendous, and is being carried on in regions which used to be considered inaccessible to man.

"Quite the most damnable spot I have ever visited," said George Bernard Shaw, as with a satanic bellow this geyser belched sulphurous fumes and boiling water 1500 feet into the circumambient.

In the Rotorua thermal region Nature provides perpetual, free-for-all, steam baths, cold plunges. Apparently this is not ladies' day but they are interested spectators.

Rotorua Revisited

By WILLIAM F. KENNEDY

TO THOSE who have not been there I would explain that Rotorua (Roto means lake, and rua, red) is the center of the far-famed thermal regions of the North Island of New Zealand. In looking up the history of the district I was surprised to read that the regions were quite unknown to the *pakeha* before 1869.

Up to then the Maoris, living in a very primitive state and at war with the white man, were its sole inhabitants. It was a lad of eleven who was the first to venture into the weird region. The object of the perilous journey was the necessity of getting stores to small and isolated British garrisons stationed here and there at danger points.

With a laden packhorse the journey through the trackless wilds took young Edwin Robertson eight days to accomplish. Today motor cars do the trip in two hours.

Stopping a night at Hamilton, a beautiful inland town on the Waikato River, next morning we picked up our niece, "M. S.," who visited us for five months when we lived at Waikiki. She is a good driver and relieved me at the wheel for a large part of the way. How grand it is to be bowling along those winding mountain roads on a magnificent autumn morning, with not a care in the world' except the care of keeping your own side of the road and looking out for the other fellow.

Yes, New Zealand is a grand country, with wide open spaces, beautiful farms, noble native bush, a splendid climate and productive soil. Certainly we do have a few earthquakes, but they are to be expected where there are volcanoes and hot lakes, and those we get here are not to be compared with what some other countries experience in that way.

From Hamilton the road gradually rises until about ten miles from Rotorua you reach the summit, from whence a lovely view of the whole district can be seen. The little town which is the center of the region nestles below amid hills, lakes and steaming pools. It consists of a few wide streets of shops, many hotels and boarding houses. The streets are well planted with trees, the gardens gay with flowers—the grounds of the government bathhouses having a specially fine display—with lawns and courts for croquet, bowls, etc. There is a large new swimming pool—

No fires required . . . native women just place their potatoes or fish in a flax kit, lower it into a steam hole, shut down the lid and leave it until cooked.

the blue bath where mixed bathing can be indulged in, and for those who need them, in the other buildings at a small cost you may indulge in the luxury of hot mineral baths of various kinds, reputed to be beneficial for numerous ills to which flesh is heir.

There are a number of steaming pools in the grounds, duck ponds, and running streams where one can feed trout weighing, I should think, as much as ten or fifteen pounds each. A couple of hundred yards away is Lake Rotorua, its waters glistening in the sun. It is about fifteen or twenty miles around, and excursions can be made in motor boats on its browny red surface to various points of interest. A little further on lies the Maori village of Ohinemutu, consisting of some scores of rather dilapidated wooden houses built among steaming holes and pools of hot water. A church rises on the shores of the lake where services are held in English and Maori.

Perhaps the most interesting spot, however, is Whakarewarewa, two miles distant. Here again the Maoris have shown their indifference to the weird and uncanny phenomena of nature by building quite a sizable town right in the midst of treacherous hot springs, active geysers, steaming morasses, boiling cauldrons, gurgling mudholes that mutter and splutter and emit noxious fumes to their hearts' content day in and day out. Strangers are warned by many danger signs where not to tread, for a false step might mean a plunge into a boiling mud bath. It is best to accept the services of one of the Maori women guides who conduct parties around for a small charge, telling newcomers the legends of the place and pointing out things of interest that would otherwise be missed. These guides all dress in red and wear a special license badge. In past days the most famous guide was Maggie Papakura. She was a woman of singular charm, and showed many celebrities over the district, eventually marrying a wealthy Englishman, and going with him to live in England. She passed to the country from whose bourne no traveler returns a few years ago, and a monument to her memory has recently been erected at Whaka. When we were there her son, a fine-looking Maori, was cleaning the monument as we passed by; so our guide, Moana, informed us.

Although in the midst of boiling springs and pools, it can be very cold in the village in winter, but no fires or heat are required to cook meals; the native women just place their potatoes and fish or meat in a flax kit, lower it

Wash day in the Rotorua region is amazingly simplified by Nature's perpetual gift of boiling water. In fact, no artificial heat is required for anything. Houses are warmed, cooking, bathing, laundering done with natural hot water.

into a box made over a natural steam hole, shut down the lid and leave it until cooked and ready to eat.

Maoris, men, women and children, about here are, of course, very much sophisticated from their constant contact with visitors and sightseers, but I would not say they are spoilt, and their naturally soft voices and native good manners are still a source of interest and charm to the *pakeha.* A part of Whakarewarewa has been set aside and here an old-fashioned Maori village has been constructed, where may be seen the *pateka* or storehouse, the chief's residence, the *tohunga,* or priest's quarters, and the little box on top of a ten-foot pole, where his "god" used to live, as the old chap told the common people in the old days; and no doubt some of them believed it.

At the Geyser Hotel, close by Whaka—a favorite place for tourists to stay—by standing in a queue on busy days you can get a "spout bath." Having disrobed, you sit in a square bath or huge tub, the water pouring in first slowly and then more rapidly until finally it comes in like a hot waterspout, sending you whirling around the tub like a cork in a soda-water bottle.

In Rotorua one comes across all kinds of little surprises. One of these is a place they call "The Domain." It is really a small park as yet only in course of making. I wandered into it by chance one Sunday morning and discovered almost everywhere I walked characteristic phenomena of the thermal regions. There were streams of warm water mysteriously appearing, then disappearing, columns of steam rising from bushes and clumps of fern; here a reddy-brown lake, there a green one; here were a couple of men enjoying a glorious bath in a hot pool. A little farther on a big bog of boiling mud gurgles up into what look like gigantic poached eggs. Outside the boundary is one of the most beautiful

Not the River Styx, nor The Grim Boatman seeking a fare, but one of the turquoise-tinted lakes of Rotorua where you can go boating in light clothing on the coldest winter day.

of the smaller colored lakes in the district, its waters being an exquisite turquoise blue, so hot that clouds of steam frequently rise from its surface. In finding one's way around the domain one has to be careful to keep to the paths or beaten track.

Quite an interesting bit of the "show" at Rotorua are the nightly concerts by two companies of Maori entertainers—one led by Guide Rangi, and the other by the well-known Maori singer, Ana Hato. The getting up of these entertainments has done much for the Maoris in the district, giving them an interest and zest in life which was greatly needed. Another very good move has been made recently in the establishment by the Government of a Maori school of carving. The art of carving, at which the older Maoris were very expert, has been allowed to die out, but Mr. Hamilton, the capable teacher in charge of the school, is doing much to revive the art. Among the students when we paid the school a visit were two boys from Rarotonga.

The fact that the famous British playwright and humorist, George Bernard Shaw, and his wife were stopping at Rotorua during our stay added much to the interest of things in general. G. B. S. arrived in New Zealand by the *S.S. Rangitane* a few weeks ago with the object of spending a month in the Dominion. A week was spent in the hot lake district; needless to say he was the lion of the day, and had a column or two every morning in the New Zealand papers in which he gave his opinion on almost every conceivable topic. Tiketere, a lurid, sulphurous, evil-smelling place of boiling mud and vapor-laden fumes, ten miles out from the township, he described to a newspaper man as "Quite the most damnable spot I have ever visited." This was not exactly what the editor wanted, and I am afraid it is not a very good advertisement for Rotorua.

But you need not go to Tiketere. There is quite enough to remind one of the nether regions elsewhere in a milder form, and I can say confidently that the thermal district with its tremendously interesting natural phenomena, the beauty of its colored lakes, its exquisite native foliage, its bracing and health-giving atmosphere, will always have irresistible attractions for tourists and residents in Maoriland.

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An open forum for discussion of problems concerning food production, distribution, conservation and consumption; public health; current habits and customs, or any subject relative to human welfare in countries bordering upon the Pacific Ocean. Address all communications to MID-PACIFIC MAGAZINE, 1111 Union St., Honolulu, Hawaii, for attention of THE EDITORS.

Some Hawaiian Fishes Found Nowhere Else

By E. H. BRYAN, JR.

Curator Bernice P. Bishop Museum

HAWAII has been called the "angler's paradise." With waters which abound with game fish of great variety, some being of large size; with a mild, equable climate, no fogs, no disagreeable cold and no intense heat, Hawaii might well become the "leading game fish center of the world."

Since the time of Captain Cook's third voyage (1778), when specimens of Hawaiian fish were first introduced to the scientific world, many fish experts have been interested in our aquatic life. Some 650 different species of fishes are now known to occur about these islands. Some of these are found nowhere else. Others range widely, being found throughout the Pacific Ocean, and some even throughout the Indian Ocean to the Red Sea and Madagascar.

These 650 kinds of fish are distributed through more than 130 families, so that one can thus get some idea of their variety.

Summary By Habit

Sixty-one are free swimming in the open ocean, rather near the surface. The color of most of these is metallic steel blue above and silvery below, no doubt to better fit them to this environment. Among these are included various sharks, flying fish, swordfish, marlin-fish, the aku, tunnies and albacore, the dolphin or mahimahi, and amberfishes.

One hundred eight species inhabit the dark ocean depths, a quarter of a mile to five miles down, and almost never come to the surface alive. Most of these are dark in color, with luminous spots or "lanterns," by means of which they are supposed to find their way about in the profound darkness of the abysmal deeps. Most of these fish are so seldom seen that they are very little known except to the specialist. They include the chimaeras, deep sea lizard, deep water eels, grenadiers, brills, deep sea beryees, cardinal fishes, deep sea sculpins, and sea bats.

Sixty-three live midway, at depths of 15 to 50 fathoms, seldom coming into shallow water, but never dropping to great depths. Many of these fishes are bright red in color. They include the John Dories, brill, pipe fish and sea horses, sea bass, serrans, red porgie, snappers, such as aku, ulaula, and ukikiki, oopu and other scorpion-fishes, dragonets, and the rare head-fish.

Reef Fish

The great bulk of the species, some 375 in number, live near or about the coral reefs, or the shallow low pools offshore. They form the most attractive and conspicuous, as well as the largest part of our fish fauna. They include the common little hammer-headed shark, the awa or ten-pounder, lady fish or oio, milk fish or awa-awa. Here live the numerous kinds of eels, the commonest of which are the morays or

puhi. Strange-shaped needle-fishes, half-beaks, trumpet fish or nenu and cornet fishes abound. Mullet, barracuda, moili-ili, tunnies such as the skipjack and kawakawa, and the many forms of ulua, are all eagerly sought after by the fisherman. The big-eyed aweoweo, the snapping opakapaka, and the various weke or surmullets are also favorite food fishes.

More interesting to the eye than the palate are the brightly colored butterfly fishes, the Moorish idol, the tangs, surgeon-fishes, parrot-fishes, trigger-fishes, including the well-named humuhumunukunuku-apu'a, porcupine fishes, puffers, and fishing frogs.

At the mouths of rivers, seldom venturing outside the reef, one finds some 23 other species. Some of these even swim upstream and live altogether in fresh water. These include the round herring, anchovies, common brill, silverside or iao, amaama or mullet, a species of barracuda called kawaloa, the common aholehole, the gobies or oopu, and the balloonfish or oopuhue.

Several species of fish have been purposely introduced. Among these are the carp and goldfish, the loach from Japan, the catfish from China, top minnows from Texas to destroy mosquito larvae, and the ayu from Japan. As game fish, the big-mouth black bass and the Shasta rainbow trout have been placed in streams on the island of Kauai.

There are about 125 species which may be regarded as being fairly common. In contrast to this over 200 species are quite rare, some being known only from a single specimen.

Food Fishes

Most of the fishes are edible; in fact, only two, the oopu-hue and maki-maki, a porcupine fish and a puffer, are considered really poisonous. Some 62 species are of high commercial value, 58 being of superior value as food.

An increasingly large percentage of the commercial fishing in Hawaii is done by the Japanese. It is quite a picturesque sight to see them set out or arrive home in their seaworthy little sampans. They leave their snug little harbor at Kewalo basin, and remain at sea not infrequently for several days or a week, keeping their catch on ice. Another picturesque sight is one of the Oriental fish markets, where from early morning until late evening the "catch" is retailed, amid the spicy odors of dried tidbits, so dear to the oriental palate. The commercial catch during 1930 amounted to 8,623,453 pounds of fish, valued at nearly a million and a quarter dollars.

The twenty food fishes which are eaten by all races, but especially by Europeans, are as follows: Akule, Ama-ama or mullet, Hapu'u-pu'u, Kahala, Kumu, Lae, Lauia, Mahimahi or dolphin, Manini, Moi, Omilu, Opakapaka, Poelu Palahu, or Chub Mackerel, Pakii, Papiopio (small ulua), Uku, Uluaula, Ulua, U'u and Weke Ula.

The Breeding Activities of the Little Redfish, a Landlocked Form of the Sockeye Salmon, Oncorhyncus nerka

By LEONARD P. SCHULTZ and STUDENTS[1]

Department of Fisheries, University of Washington, Seattle.

IN the daily newspapers, and in scientific journals, may be found numerous accounts of the egg-laying activities and the migrations of salmon and trout. The behavior of these fish just preceding and during the spawning period has attracted the attention of fishermen and naturalists for many centuries, but during all of this time few, if any, of the published accounts accurately describe their remarkable spawning activities. Although over a billion dollars worth of Pacific salmon has been taken for commercial purposes since 1900, the breeding activities of these fish are as yet untold by American authors.[2] Therefore, this account of the breeding behavior of the little redfish, with comparative notes on other closely related species of salmon and trout, should be of general scientific interest.

Breeding Activities

The breeding activities of the little redfish, *Oncorhynchus nerka,* the dwarf form of the large sea run sockeye salmon, may be observed in Swamp Creek about one mile above its mouth (Figure 1), during the months of September, October, and November. This creek, which arises in Stickney Lake and flows some ten miles southward before entering Lake Washington, is only one of the many streams in western North America in which salmon may be observed to pursue

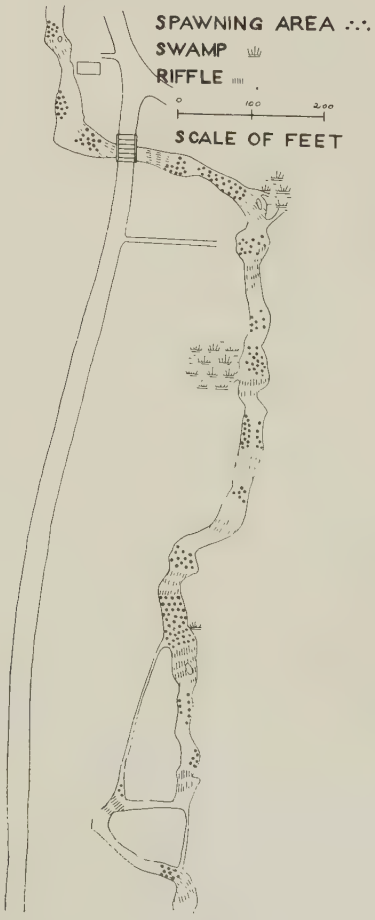

FIG. 1. A portion of Swamp Creek showing the region where redfish pursue their breeding activities.—Drawn by M. B. Schaefer.

[1] The observations presented in this paper were made by the author and his students: Philip Aaron, Lauren R. Donaldson, George Garlick, Wendall Hoesly, Daniel Merriman, Milner B. Schaefer and Arthur Welander, who were among those enrolled in the course, "Early Life History of Fishes," given by the Department of Fisheries, University of Washington, Seattle, Washington.

[2] Certain Russian papers discuss the breeding activities of salmon, but we have not been able to obtain them.

TABLE I.
SEXUAL DIMORPHISM IN THE LITTLE REDFISH

	Males	Females
Length of the jaws	Elongated with hooked tips, the lower jaw often slightly projecting beyond upper; snout arched and hooked.	Jaws and snout not elongated or hooked, but normal.
Teeth	Large canine teeth on tips of jaws; other teeth on jaws and tongue enlarged.	Teeth not especially enlarged.
Length of the maxillaries	Enlarged and elongated, usually extending considerably behind posterior margin of eye.	Shorter and normal, usually ending under posterior margin of eye.
Length and shape of head	Long and tapering to a blunt point anteriorly.	Shorter and blunter.
Dorsal contour	Contour of back arched in front of dorsal fin; contour of head slightly concave at occiput.	Contour in front of dorsal fin evenly curved; contour of head slightly convex at occiput.
Greatest depth of body	Body compressed, deeper, averaging .27 of standard length; body wedge-shaped in cross-section just before the dorsal fin.	Body rounded, less deep, averaging .22 of standard length; shape of body rounded in cross-section just before dorsal fin.
Color of body:		
Sides	Crimson or bright red color extends up among the black spots to mid-line of back.	Dull red color extends about half way up from lateral line to back, usually not among the black spots of the back.
Back	Red to dull red, sharply contrasting with the greenish top of head.	Dark greenish to greenish-red, blending in evenly with greenish top of head.
Dorsal spots	Larger, and elongated dorso-ventrally in front of dorsal fin.	Smaller and nearly round.
Color of fins:		
Dorsal	Red to crimson.	Dark greenish to greenish-red.
Anal	Reddish.	Dark greenish to greenish-red.
Adipose	Reddish.	Dark greenish to greenish-red.
Abdomen	Hard and rigid.	Soft to firm but rather flexible.
Mature sexual products	Milt may be squeezed out by gentle pressure.	Eggs may be squeezed out by gentle pressure.

Measurements of Breeding *Oncorhynchus nerka*

Length of head in hundredths of the standard length

	23	24	25	26	27	28	29	30	31	Total	Mean P. E.
Males	..	2	..	3	11	9	9	1	1	36	27.69 ± 0.161
Females	5	7	8	2	..	..	..	..	..	22	24.32 ± 0.132

Greatest depth of body in hundredths of the standard length

	20	21	22	23	24	25	26	27	28	29	30	31	32	Total	Mean P. E.
Males	..	1	..	1	1	3	7	10	2	4	4	2	1	36	27.25 ± 0.257
Females	2	4	7	5	1	2	..	..	..	..	..	..	..	21	22.24 ± 0.198

Length of snout in hundredths of the standard length

	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	7.0 to 7.4	7.5 to 7.9	8.0 to 8.4	8.5 to 8.9	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	Total	Mean P. E.
Males	..	..	1	1	4	3	17	4	3	2	35	8.67 ± 0.085
Females	3	10	5	4	..	..	..	..	..	..	22	6.43 ± 0.068

Length of maxillary in hundredths of the standard length

	11	12	13	14	15	16	17	18	19	Total	Mean P. E.
Males	..	..	1	..	2	15	10	6	2	36	16.64 ± 0.130
Females	1	8	10	2	1	..	..	..	..	22	12.73 ± 0.124

their breeding activities. It is a spring-fed stream flowing through rather hilly country until the last five miles of its course, where it becomes a series of pools and gravel riffles. The surrounding land has been logged off, leaving many fallen trees to clog the stream, and the margins of the creek are thickly overgrown with brush. The width of the creek varies from 6 to 35 feet, and its depth from a few inches on the gravel riffles to some 6 feet in the deepest pools. Where the redfish spawn, trees of various sizes overhang the stream and shut out the brightest light.

Little redfish may be caught with a hook and line in Lake Washington during the spring and early summer before they put on their spawning dress of dark red to wine color. While in the lake they pass under the name of "silver trout," but by the time the first fall rain occurs or even before, the "silver trout" find their way to the mouths of streams that flow into this lake. In late August or early September a few of the little redfish can be seen playing around on the gravelly riffles of the stream, but soon after the first big rain, which usually occurs in September or early October and which materially increases the stream flow, the redfish appear on these same riffles in greater numbers. Later in the season, during early November, they are most abundant, after which their numbers rapidly decrease, so that by the first or second week of December not a single one remains, where one month before it was possible to count over 100 fish on one small riffle 20 by 40 feet.

This large number of redfish could not be seen unless the greatest caution was used in making an approach, for any sudden movement frightens them, and they seek shelter usually in the deep holes above the riffle, seldom below, where they hide for some time before venturing out. If the observer remain very still for five to twenty minutes they will quickly swim back to their original position over the riffle, stay a moment, and leave for the deep hole again, soon to return. If all is still and quiet after one or more such attempts, the redfish will remain on the riffle, oblivious of the presence of the spectator. However, if the observer should make sudden movements they dart away, and then he must wait for them to return and again become accustomed to his presence. If the observer possess the patience and have sufficient time, he can become so much a part of the environment that he can even stand astride one of the nests, while the male and female redfish pursue their normal activities.

During the course of an hour the fish become so thoroughly accustomed to the observer that they invariably congregate again in the water, which is from 3 to 10 inches in depth near the upper end of the riffle, just above where it begins to break over the stones. There the water is flowing much more slowly than on the riffle below where it moves at a rate of 2.5 feet or more per second.

The redfish gradually segregate themselves in pairs and these remain over certain small areas of the stream bed, sometimes in water so shallow that their backs are exposed. Close examination of spawning pairs and others indicates that the female can be distinguished from the male (Table I) in several respects.

Defense of the Nest

The observer, standing quietly among the redfish near the upper part of a riffle, is often attracted by the splashing of water over one of the nests or redds. A close study may indicate that a male has

FIG. 2. A diagram illustrating the *escorting act* of the male redfish. Note that the female (dotted) remains over the nest while the male drives the invader (solid black) away. The male and female are shown in their normal positions over the nest.—Drawn by Dan Merriman.

just driven another male away from its nest. Sometimes in so doing the defender catches his teeth in the abdomen, near the pelvic fin of the invader, and before he can loosen himself the two drift down-stream for some distance. The defender usually returns to his nest and immediately takes up his position over, a little behind, and to one side of the female (Figure 2). Both sexes jealously defend their location against invading fishes by rushing at them or by the male's escorting the intruding male up-stream or to one side in the following manner: An invading male may approach from one side or the other, in which case the defending male will rush out from the nest to meet him, often raising his dorsal fin as he approaches. If the intruder is not to be so easily scared away, the defender will swim slowly toward him and when about a foot or so from him (Figure 2) he will turn so that the two fish are parallel and they then proceed slowly up-stream, sometimes as far as eight feet before the invader either will go his own way or make another dash for the nest. If the latter happen, the *escorting act* might occur again, until the invader leave the redd. It is typical of one, or both, of these fish to have their dorsal fins fully extended during this *escorting act*. As soon as all becomes peaceful, the two owners of this particular spot will again assume their previous positions (Figure 2) with reference to each other and to the nest, the brighter red-colored fish or male usually remaining down-stream and a little to one side of the female. In general the female defends the upper part of the nest, while the male defends the entire nest.

While the observer watches a pair of redfish defend an area, his attention may be focused upon the bottom of the stream where an area of approximately 18 by 24 inches appears to have been swept clean of all sediment. This is a shallow excavation of some two or three inches, with the finer gravel heaped up in a crescent-shaped mound on the down-stream side. Glancing around on the riffle the observer may see as many as ten other such nests, some of which are larger and occupying a space of about 2 by 4 or 5 feet, but usually in such large redds more than one pair has been working. The bottom of the nest is composed of small stones varying in diameter from 4 inches down to ½ inch or less, the smallest pebbles usually occurring down-stream from the shallow excavation, where they appear to have

been carried by the current. The shape of the nest obviously depends to a large extent upon the rate of flow of the water, for the smaller round nests occur in water of little current, while the oblong nests are situated in water of a stronger current, their respective lengths depending considerably upon the rate of flow of the water, as was observed by Kusnetzow (1928: 189-190).

Other activity besides the defense of the nest may be noticed. Usually much splashing of the water occurs in various places, above and below the area where nests are located. Most of this splashing seems to be caused by unpaired males who are not defending nests but who are apparently fighting or sporting among themselves. In deep holes just below the riffles where the water is very quiet, now and then a redfish can be seen to jump clear of the surface, presumably in play. During all times of the day the unpaired fish are seen to be playing about, darting here and there, leaping out of the water, and sporting in various ways. But those fish which are paired off, over the nests, attend to the propagation of the species.

Nest-Building Activities

A pair of redfish usually engage in normal nest-building activities when unmolested by invading fish. If the pair is alone, the female may let herself drift over the lower center of the redd, where she will turn over on her side and vigorously flex her body 4 or 5 times against the bottom as this motion carries her a foot or more up-stream. This activity stirs up a cloud of sand and gravel which drifts down-stream a few inches to a foot or more before it settles. The female may return to the starting point and repeat the action. Upon timing the intervals between these *nest-building acts,* the following results were recorded in seconds.[3]

R. 8; R. 14; L. 18; R. 38; L. 25; R. 8; L. 15; R. 81; R. 24; L. 11; L. 20; R. 16; R. 55; L. 11; R. 70; L. 35; R. 15; L. 15; and R. 10; when the nest-building acts were interrupted by an invader. On another nest another female flexed her body as shown by the following time intervals in seconds: 100, 20, 10, 5, 5, 5, 5, 7, 4, 8, 4, 5, 13, 8, 8, 3, 4, 8, 7, 8, 7, 12, 5, 11, 30, 15, 12, 30, 30, 6, 15, 4, 6, 6, 11, 5, 7, 7, 4, 60, 70, 8, 7, 75, 7, 4, 7, 9, 24, 15, 10, 48, 11, 37, 45, 14, 12, 58, 45, 15, 30, 48, 8, 5, 50, 10, and 15, when she was disturbed by an invading female.

The process of nest building, the most obvious activity over the nest, is done mostly by the females, although now and then certain males flex their bodies 3 to 5 times at intervals of from 3 to 5 minutes, more or less. Certain males never participate in the construction of the nest, while others flex their bodies very often. Usually during the 2 to 4 seconds that it takes the female to flex her body for purposes of disturbing and lifting the gravel so that the current carries it down-stream, the male stands by inactively near the lower part of the nest.

It is not known how long a female will continue her digging activities before depositing her eggs, although the following evidence may be indicative. One female had started a nest on November 6th, but no male had found her, probably because she selected a spot somewhat isolated from the main part of the stream where most of the males were sporting. She was easily identifiable because of an injured dorsal fin, and unlike most of the redfish she lacked nearly all of the dark spots on her back. Five days later this same female had dug a fair-sized nest but as yet no male had found her. It is thought that in general the nest is prepared in a much shorter time when both sexes are present.

Upon reviewing the available American literature we find that even in recent years the *nest-building act* of salmon and trout has been confused with the *spawning act* by numerous authors. Kendall and

[3] R, indicates that she turned her right side toward the bottom of the nest, and L, that her left side was turned toward the bottom of the nest.

Dence (1929: 258), in writing about the brook trout, state:

"We watched this pair nearly two hours before we saw the spawning act. The female made two preliminary attempts by rolling slightly on one side; then after a few minutes she rolled completely on her left side and began moving her tail fin up and down—slowly at first but with rapid increase in frequency, so that the fish move forward in a snake-like fashion for a distance of three or four feet. This performance required only a few seconds, and during this time six or eight strokes of the tail were made. The female always returned to the starting point after recovery. During the course of the next half hour we saw several exhibitions of this sort, sometimes the fish turned on the left, sometimes on the right side. During this time the male took no part in the act but kept on guard. The action of the female roiled the water considerably so that our view was obstructed, but on one occasion we saw two eggs settle to the bottom with the silt. [These probably were stirred up from the silt of the bottom.] In many instances the vent was in good view but we could see no eggs extruded."

In making further observations on another pair of brook trout, Kendall and Dence (1929: 259) write:

"About this time the female began the spawning act. The area covered in her movements was about two or three feet long, and this distance was covered in six to eight strokes of the tail. The female then usually returned immediately to the starting point, but occasionally she disappeared from view for a few minutes. The male never followed on these excursions. After the female had spawned twice the male swam over the same area, and in a similar manner. During our observations we noted that the fish swam on their left side more frequently than on the right."

This obvious *nest-building act* has been generally misinterpreted as the spawning act or confused with it by various authors, namely Rutter (1904: 134-135) on the chinook salmon; Evermann (1902: 2227-2228) for the sockeye salmon and (1896: 187-188 and 191-192) for the little redfish; Evermann (1905: 88) for salmon; Menzies (1925: 28) on the Atlantic salmon; H. S. Davis in White (1930: 107) on chinook salmon; Babcock (1930: 57-58), and others.

The following authors have apparently interpreted their observations in the same manner as we have interpreted ours: White (1930: 103-107) on the eastern brook trout; Greeley (1932: 242-243) on brook, brown, and rainbow trout; and Hazzard (1932: 345) who says of the eastern brook trout:

"The female prepares the nest by darting upstream into the gravel, turning quickly upon her side and vibrating her body against the bottom, culminating with a sweeping action of the tail. Nest building was observed to last as long as two days. Observations at night with a gasoline lantern showed fish as active as during the day. A male was always seen in attendance whenever a female was found at work on a nest. He takes no part in nest building but is constantly fighting intruding males, relinquishing his position to stronger fish."

Milner (1874: 53-54) observed the breeding of brook trout and with the aid of Seth Green probably correctly interpreted the *nest-building act.*

The Courtship Activities

Sometimes between the intervals of nest building by the female, the male may behave peculiarly. His actions might be overlooked, because the movements of the male fish at this time are less obvious than the flexing movements in nest building. Between many of the nest-building acts of the female, as she drifts back into the center of the nest during recovery and assumes a normal position over the center of the nest, the male usually approaches her from behind and a little to one side. He will just touch his head or snout to her body in the region between the adipose fin and the pectorals, gently move his body toward and against hers, at which moment he will stiffen and vibrate or quiver vigorously for a second or two (Figure 3). He will partially erect his dorsal fin near the end of this act. The female usually remains perfectly still, although in one case out of many hundreds seen by the various observers she too trembled in unison with the male. No eggs or milt were ever seen in the water during this *courtship act,* thus indicating that no actual spawning really occurs. Time and time again the male repeats this

courtship act if no intruder interrupts. Upon timing the frequencies of this quivering, we found that it took place as follows, recorded in seconds: 45, 51, 64, 50, 38, 69, and 43. As spawning time approached this *courtship act* occurred as often as every 5 to 10 seconds.

Considering the large number of authors who have seen the breeding activities of salmon and trout, it is peculiar that so few have described this *courtship act.* Probably of American observers Milner (1874: 52-54) was the first to observe and describe it for the brook trout as follows:

"Soon after she rolled on her side, made three convulsive flutters, striking the pebbles with her tail, and sending up a little cloud of gravel and sand. Immediately afterward she turned short round, as if looking at the condition of the nest, or its contents, and once I thought I detected her taking some gravel, possibly an egg, in her mouth. She lay resting quietly on the bottom for a short time, while the male played back and forth around her. She moved away from the nest after a while, visiting some nests in the vicinity that probably contained the eggs of other trout, but soon returned to her own nest. The male attended her very closely, and, as they returned to the nest, resting for a second near her, he curved his body slightly, bent the dorsal fin to one side, and with his body strained to rigidity, a slight tremor was observed, and he again moved away. About once in ten minutes the fluttering occurred on the part of the female; a little cloud of sand was stirred up, but I looked a long time in vain for an egg. At last one was thrown upward with the sand, and the male coolly swam toward it, opened his mouth, and it disappeared down his throat. His oft-recurring rigidities and tremors seemed to have no special connection with her throes, or the possible emission of eggs, which I suspected at these times, though without any evidence of sight. He was very brave in driving off the males that approached, but one large one came twice, while I was watching them, that he did not attack, but swam in between him and his mate several times, with an evident intention of keeping him from her. The stranger, however, in both instances placed himself near the female, and the same curving, rigidity, and tremors were observed.

The last time the rightful groom swam away with the stranger, who gave him several punches with his jaws. The evident intention of the former semed to be to entice the intruder away from the nest. He escorted him off for a long distance and returned again to his mate. After three hours' observation of similar manoeuvers, I left them to pursue, undisturbed, their singular actions."

Since Milner's time we fail to find a single reference that clearly describes this courtship act for any salmon or trout although it is indicated in the work by Greeley (1932: 243) and Hazzard (1932: 345). Dr. John W. Greeley in a letter to the senior author on December 5th, 1933, states:

"The 'vibratory' courtship behavior that you mention occurs in rainbow and brown trout but I have not seen it in brook trout (despite hundreds of observations). It is the first phase of the courtship and I have seen newly-arrived males start it (but it is also continued in the period just before spawning). In all three species, later stages of courtship are characterized by more or less side to side swimming of the male over the female when she is resting at the bottom of the nest pit."

This type of courtship, mentioned by Greeley above, but not observed by us for the little redfish, was commonly seen during the breeding activities of the coho salmon, *O. kisutch,* as the male would swim back and forth over the female who was over the center of the nest. This activity may be preceded or followed by the vibratory *courtship act.* Hazzard (1932: 345) observed this for the brook trout, for he writes:

"Courting activities consisted of two approaches by the male. In one of these he approached the female as she lay in the nest and pushed her gently from the center of the depression. A peculiar action by the male was also interpreted as courtship. He would swim above the female, first in back and then in front of her dorsal fin, touching her with his body and fins."

Greeley in his letter continues:

"The rainbow has a third recognizable courtship behavior, the male 'nudging' the female in the side with his snout."

This latter courtship has been observed in the little redfish and in the coho salmon.

If the little redfish are not disturbed by invaders, the courtship acts of "nudging" and "quivering" increase in frequency and may or may not end in spawning.

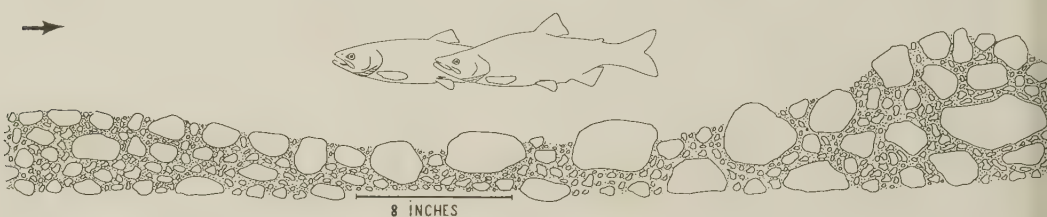

FIG. 3. A lateral view of a pair of redfish over a nest to show their relative positions during the *vibratory courtship act.*—Drawn by Dan Merriman.

Considering each student in the Department of Fisheries, University of Washington, Seattle, who has studied the breeding activities during the last three years, over 400 hours have been spent watching the little redfish and but twice during this time, with one additional doubtful case, have the fish been seen to go through what was interpreted to be a definite spawning act.

The Spawning Act

The spawning act has been observed on two occasions, once by Arthur Welander and Daniel Merriman, and again by Arthur Welander. Observations began at 2:30 P. M., October 16, 1933, on a pair of redfish occupying a nest near the upper left-hand corner of a riffle. This pair was more or less unmolested by the other fish in the vicinity, which allowed the female to engage actively in digging the redd, and allowed the male to exhibit the typical vibratory courting act. This act was very obvious because the dorsal fin of the male was above the water for part of the time, causing tiny surface ripples. The female during this act displayed no unusual activity, but continued her normal swimming movements. The courtship act usually took place between the successive digging acts of the female, both occurring at more frequent intervals as the time of spawning drew near.

The spawning act occurred suddenly at 3:45 P. M. (Figure 4). The female settled down on the bottom in the center of the nest, head up-stream. The male quickly swam up beside her, with his body slightly curved and pressed against hers, all swimming actions being temporarily suspended. The head of the male was slightly in advance of the female's, and, being the larger, his tail was just below hers. The two fish lay very slightly over on one side and tightly pressed against each other, with their bodies somewhat curved, and their abdomens hard against the bottom. The male was thought to vibrate during this act, but this was not clearly seen. Milt was plainly visible near the conclusion of the spawning act, which lasted about two seconds. The milt formed a small, dense, white cloud about three inches wide and four inches long, which was carried downstream by the current. A few eggs were seen under the female at the termination of the act. No activity of any sort was observed for the female because she was on the opposite side and was, therefore, partly obscured from view by the male.

The second observation of the presumed spawning act was made by Arthur Welander on November 15, 1933, at 3:15 P. M. The sky was overcast as on October 16th, but it was not raining as on the latter date. The nest was in a riffle, about three feet below the edge of the quiet water, thus making observations difficult because of the rippling surface of the water. As nearly as could be seen, the act was essentially as described above, except that both fish had their mouths wide open. This detail was not noticed in the first case and could have been easily overlooked. Milt was plainly visible, but no eggs were seen, and none could be found in the nest or below it some time later when the stones in the region were turned

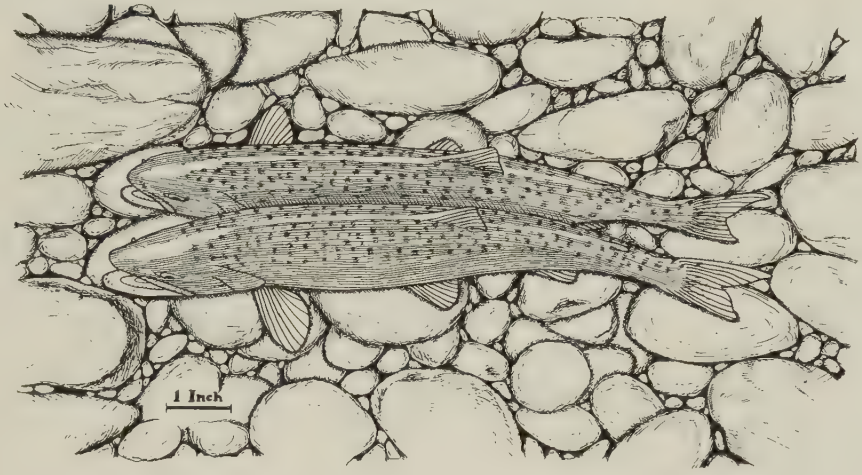

FIG. 4. A diagram of the *spawning act* of the little redfish, *Oncorhynchus nerka*. Male (lower) and female (upper). Drawing made by Arthur Welander from preserved fish placed in the approximate spawning positions. The positions of the fins were not seen but it is supposed that they were spread against the rocks below, enabling the fish to maintain their positions in the current.

over. It is possible that the female did not deposit eggs although she went through the spawning act with the male. That such activity does occur is attested by other observations. On November 11th, a male was paired off in a nest with the female, but made certain advances toward another female in an adjoining nest three feet away. One of these advances terminated in the center of this adjoining nest not three inches from the pair already in it, in a manner suggesting that this male spawned alone. He settled down on the bottom with his mouth wide open. Sperm was emitted, because a small white cloud appeared in the water below him. The rightful owners of this nest, male and female, continued their activity without even passive interest in this erratic behavior. This act was repeated again in a few minutes.

Among the large number of papers written on the habits of salmon, we have been able to find but two American authors who have definitely described the spawning act. All others, as was noted previously, have not seen it, or have more or less confused it with the nest-building and courting acts, from which we conclude that the true spawning act is seldom seen. Hazzard (1932: 345) on the brook trout says:

"Spawning was presumed to occur when the male approached as in the first act of courtship and forced her upon her side at the bottom of the nest. A vigorous side-to-side vibration of both fish then occurred, during which it is supposed the eggs and milt were extruded, although sediment and motion of the water made it impossible to see them. Following this, the male dropped to the lower rim of the nest; the female immediately stirred up the gravel at the head of the nest as though covering the eggs. This spawning act, which lasted about two seconds, was repeated during one observation after an interval of about ten minutes."

We observed similar actions on the part of a pair of coho salmon but did not interpret them as spawning acts since no milt or eggs were noticed, although had milt been emitted it could have been easily seen. Greeley (1932: 243) states:

"A single act of spawning occurs at a single nest pit. There is a definite mating clasp that is different from any of the phases of behavior which precede spawning. The change in behavior of the female immediately after the eggs have been deposited is conspicuous.

"Before spawning, the female takes a position at the bottom of the pit, with pectoral and ventral fins well spread against the stones. She

remains motionless with her vent region close to the deepest part of the pit. Of brook and brown trout, the male, a larger fish than the female at all observed instances of spawning, darts to a position against one side of the female and curves his body toward hers in such a manner as to hold her against the bottom. For several seconds there is a rapid vibration of the body of the male. The spawning position of a female rainbow trout is similar to that described for those of the other species except that upon coming into position, a female rainbow trout opens the mouth. The two rainbow trout males, one slightly larger than the female, and the other typically a younger, smaller male not so large as either fish, quickly take positions, one at either side of the female. As they come into place, with fins spread against the bottom, they open their mouths. Both are seen to be tightly wedged against the female, the tails of the grouped fish being in close contact. The force of the current, acting against the open mouth of each male, is transmitted into a strong pressure against the sides of the female as the three fish remain motionless for approximately five to eight seconds. An appreciable cloudiness of the water, doubtless caused by milt from the males, was noted at one nest. Although eggs could not be seen when deposited at any of the trout redds, their presence was verified by excavation of the exact spot where spawning was noted."

Post-Spawning Activities

The female continued her digging undulations immediately after both of the spawning acts which were previously described. In the case of the spawning act seen on October 16th, digging was less vigorous than before. After the spawning act observed on November 15th, the female redfish made more frequent and more vigorous flexing than she did before the event. No unusual activity was noted in either male which took part in the spawning acts. They continued in their relative positions over the nests for at least 30 minutes or until disturbed by us.

Greeley (loc. cit. p. 244) states that male defense lasts only through early stages of egg covering and by the time males desert, which they do within about five minutes of the time of spawning, an effective but unfinished coating of gravel has been placed over the eggs. In the case of the little redfish, no marked changes in nesting activities before and after spawning were noted. Males have been observed to remain over a nest so weak that they were unable to maintain their positions in the current.

During the breeding season numerous recently-dead fish, which have spawned out, lie along the banks and in the pools, suggesting that death occurs soon after the completion of the breeding activities.

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Fruits of The Land in Hawaii

By GEORGE MELLEN
President, The Mellen Associates, Ltd.

VIEWED from the standpoint of trade and industrial development, to which my organization is devoted, Hawaii appears to offer worthwhile opportunities for expression of the pioneer spirit. Such spirit, for example, as James D. Dole expressed when he dug a mighty industry out of the soil and climate of Hawaii with nothing more to start on than a few scrubby pineapple plants.

Others had preceded him in cutting and trying but in 1900 he gave the growing and canning of pineapples an impetus that sent it booming along from the 2,000 cases packed that year to more than 12 million cases at last reports. Nearly 30 million dollars annual income to Hawaii.

Sugar, the older industry, now bringing in some 65 millions annually, did not pop right out of the box, either. It is the result of splendid pioneering which sorely tried the souls of valiant men.

What of the opportunities lying at hand for the pioneer of today? Products of the land, already nursed to sufficient prominence by devoted scientists in the field of agricultural experimentation, seem to warrant adoption by anyone wishful of making a career in a pleasant land.

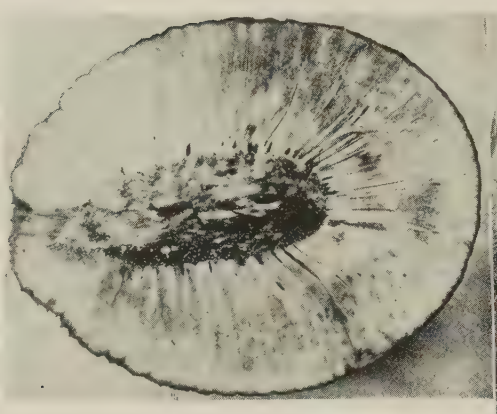
Hawaii offers considerable range of climatic conditions from tropical to subtropical within the arable area. All islands are mountainous, including the highest island mountain in the world, Mauna Kea, 13,825 feet. Its adjoining peak, Mauna Loa, 13,675, is sheathed in perpetual ice and often snow-capped. Waialeale, 5,080, is known as "the wettest spot on earth." Haleakala, earth's largest extinct volcano, scores 10,032 feet, and Kaala 4,030. These, with their supporting ranges, sweeping uplands and innumerable gulches and canyons, are watersheds and offer change of climate near at hand if desired, even to chilblains if you wish.

With this range of climate it is possible to produce almost any tropical or subtropical fruit, vegetable or nut.

Further to that thought, there is so little difference between Summer and Winter in Hawaii that almost any fruit or vegetable seems willing to bear at any season under horticultural manipulation. Annual plants become perennials and keep right on growing and bearing, if uncontrolled, until exhausted.

Ginger, many varieties of which grow naturally in Hawaii, is at present commercialized only to the extent of supplying local demand for fresh ginger root for home use. One variety, running chiefly to bloom of enchanting fragrance, favorite flower for the Hawaiian *lei*, or floral necklace, has been proved by recent laboratory work a source of seductive perfume and delectable flavoring extracts.

Another promising source of perfumes and flavoring extracts is a variety of mimosa, called *klu* in Hawaii, which grows wild abundantly in the arid sections.



Breadfruit, staff of life throughout much of Polynesia. Left, 4-pound fruit bisected; right, Dr. Wilder examining green fruit on a young tree propagated from cuttings brought by him from Tahiti. Photos by Hawaii Agricultural Experiment Station.

Annatto (*Bixo orellana*) thrives in Hawaii. From it comes the yellow dye for coloring butter, cheese, confections and other products requiring an edible vegetable dye. Nothing has been done with this valuable plant commercially in Hawaii, though its products are bought extensively in the United States, chiefly from Brazil and French Guiana.

Of the three neglected plants just mentioned any or all would make a nifty career for some gentleman farmer with a flair for romance yet not indifferent to reasonable profits.

Breadfruit has been since time immemorial highly regarded in Hawaii. Old Hawaiians have a saying that if thy house is shaded by a breadfruit tree thou shalt not want. Recently there has been brought from Tahiti and propagated successfully in Hawaii some 20 superior varieties of this valuable fruit tree. For this constructive work all credit goes to Dr. Gerrit P. Wilder, Honolulu, who knows all about the breadfruit from root to table.

Breadfruit is the staff of life of the greater part of Polynesia and for it Britain sent Captain Bligh in command of *H.M.S. Bounty* to Tahiti in the 18th Century. He didn't get the breadfruit sprouts, but accumulated the most astounding mutiny in history, hardships enough to kill a dozen lesser men, and inadvertently colonized Pitcairn's Island which, today, is perhaps the world's most romantic spot.

Dr. Wilder has opened a vista of enticing possibilities to some horticultural argonaut who can see himself as lord of a breadfruit plantation in romantic Hawaii.

Other tropical fruits doing well in Hawaii yet still in the amateur class are, alphabetically: Akala; Akee, Barbados cherry; Brazilian cherry; Carambola; Carissa; Carob; Cashew; Chayote; Cherimoya; Citron; Cacao; Coconut (all over the place); Custard apple; Date; Durian; Hog plum; Jackfruit; Java plum; Jujube; Kumquat; Litchi; Loquat; Lucmo; Lungan, Macaw palm; Malabar chestnut; Mammee apple; Mangosteen; Monstera; Pistachio; Ohelo berry; Olive; Papaya; Passion fruit; Pejibaye; Pitango; Pitaya; Poha berry; Pomelo; Rose apple; Sapodilla; Sapote; Seagrape; Soursop; Star apple; Sugar apple; Tahitian gooseberry; Tamarind; Wampi; Water apple; White sapota; Wi-fruit; Yellow garcinia.

Avocado, of course, reaches a high state of perfection and great size in

Taro field. This robust lily provides the Hawaiian staff of life, poi, said by doctors and dietitians to be the ideal food for mankind. Photo by Hawaii Agricultural Experiment Station.

Hawaii. Considerable commercial progress has been made with this fruit by the Hawaiian Avocado Company, Ltd., with orchards of considerable extent in bearing and a plant for processing the pulp. Chief outlet, as an ingredient for mayonnaise.

Bananas are native to Hawaii, where all varieties thrive. Commercially grown for many years, and continuously exported in a small way, there is too much competition to make the thing attractive because bananas hold the world's marathon record for long trips over land and sea.

Many other fruits, berries and nuts are not mentioned at all in this article either because they do not appear at this time to offer themselves to successful promotion or because they are already developed commercially in temperate or substropical sections of the United States.

Taro, tropical tuber from which the Hawaiian staff of life, *poi,* is made, has always been an important, well-nigh vital, food product for island consumption. Doctors aver that poi is the best food known to mankind. Up to a short time ago it had defied all attempts to preserve it for export. Many, earnest and capable, have worked on it, chiefly by dehydration, met sales resistance because the product, somewhere en route, lost the attributes which appeal to poi connoisseurs.

No one had, apparently, thought of attempting to can poi until my own organization, The Mellen Associates, Ltd., faced with the problem of exporting a trial lot to a big mainland food laboratory last October, took a chance. Results promise well, yet there is much still to be done in the laboratory before sound and sensible recommendations can be made for commercial follow-up.

No consumer outside of Hawaii knows anything about poi. Educational literature, directions, recipes, are being worked out by food chemists, dietitians, domestic science experts, doctors — notably Nils P. Larsen, M. D., medical director, Queen's Hospital, Honolulu, who is convinced that poi will prove a boon to old and young. Educational literature, directions, must be soundly worked out, clearly set forth.

Further, no food chemist would think of a definite conclusion on any vegetable product until it has gone through twelve months of keeping test, as the impulse to respond to changing seasons is always possible. To paraphrase the familiar procreant classic, "Tin cans do

Pia bulbs; left, profile; right, bottom. A native of Hawaii, its fine starch has been highly valued for untold centuries, as yet commercially unexploited. Photo by Hawaii Agricultural Experiment Station.

Kalalau Valley, Island of Kauai, Hawaii, scene of Jack London's famous story Kuulau the Leper. As yet inaccessible save by difficult mountain trail and, precariously, by sea, this beautiful fertile valley is uninhabited. It is characteristic of the many valleys of the Hawaiian Islands spreading fanwise from the mountains to the sea. The pali (cliff) in the background above is five thousand feet high. A stream of clear mountain water runs from the head to the sea.

not a prison make nor thermal bars a cage." The Call of the Wild has caused more than one pet to surprise its master.

Pia, next important tuber, is a native of Hawaii, as its botanical name *Tacca sandwicensis* indicates. Since time out of mind Hawaiians have extracted from *pia* a fine starch, regarded it highly, both medicinally and as a food. Found everywhere in Hawaii in the wild state, its bitter rind protecting it from extermination by wild pigs, it thrives under cultivation, is well adapted to intercropping with slower producers. It yields a starch of extraordinary quality highly valued as food, for invalids especially.

Coffee is an old-timer (100 years) in Hawaii, yet little has been done to commercialize it properly through better packaging; advertising it seductively as its fine quality merits, with the romantic background of Hawaii. Hawaiian coffee is grown chiefly at Kona, island of Hawaii, average annually nowadays ten million pounds green, hardly enough to supply selected coffee clutchers in mainland markets. Much suitable land available is still unused for coffee-growing.

Besides the omnipresent and well-known coconut, Hawaii claims but one other native with commercial possibilities, the *kukui* nut, abundant in its wild state in the mountains throughout the Islands. Its Hawaiian name means light, as its nuts were in ancient times the source of oil for stone lamps or, strung on coconut ribs, fed the flame of the *lama,* torch. As a food, it is always served among *hors d'oeuvres* at native meals. It is prepared by roasting in the shell, grinding the meats with red salt. Owing to its powerful cathartic element, only a few pinches of this appetizer are eaten at a time. It has a delicious flavor, and its regulatory effect may have much to do with the robust alimentation and satiny epidermis of the Hawaiian race.

Of the introduced nuts, many of which do well in Hawaii, only the macadamia has been brought into commercial production. This enterprise, child of The Hawaiian Macadamia Nut Co., Ltd., is a lusty infant, yet has barely scratched the surface. Demand is so far ahead of supply that it will be years before there is a possibility of meeting it. The trees require seven years to come into bearing.

(Further information on land crops of Hawaii will be furnished gladly from authoritative sources in response to requests addressed to The Mid-Pacific Magazine, 1111 Union Street, Honolulu, Hawaii.—The Editors.)

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Expatriation---Back to the Soil

Remarks on the occasion of the Fiftieth Anniversary of the First Japanese Immigration to Hawaii

By TAKIE OKUMURA with UMETARO OKUMURA

ON FEBRUARY 17 of this year, Japanese throughout the Territory are celebrating the Fiftieth Anniversary of the arrival of the first Japanese immigrants to Hawaii. The vernacular newspapers and magazines are full of suggestions on the ways and means of celebrating this memorable day. They are splendid. But may we go a little further and offer a suggestion that instead of a noisy festival the Japanese can resolve to do two things as a fitting memorial? They may require considerable time, but honest and sincere endeavors will help the Japanese win hosts of friends. These two things are: (a.) To expatriate our children from their allegiance to Japan. (b.) To encourage our children to take up farming as a life profession.

Expatriation

EXPATRIATION is not a matter to be argued. It is the plain duty of every dual citizen to expatriate, and cut off every tie that binds him to the country of his parents. If children of foreign ancestry in Japan made the plea: "We were born and reared in your country; we want to live here permanently and enjoy the privileges accorded to your subjects; give us the rights of citizenship," what would the officials say? If *we* were the officials we would naturally ask them: "We may grant your request, but are you aware of these facts; our country has a history of 2,500 years with an unbroken line of Emperors? Will you be loyal to our Emperor, and fight and die if necessary for our country?" If we doubted their sincerity, we would immediately reject their plea, because it is too risky to have hyphenated citizens. We want whole-hearted allegiance, and not lukewarm loyalty. This is common sense, and there is nothing too technical or legal about it.

Let us look at the question from the standpoint of America. Her Constitution guarantees the right of citizenship to those who are born within her borders. But she demands undivided loyalty from them. She demands absolute allegiance to her flag and country, just as much as Japan demands, and it is not unreasonable.

Then, Hawaiian-born Japanese, possessing the right of American citizenship, should not hesitate for a moment in expatriating themselves. Parents who have registered the birth of their children with the Board of Health, or have received certificates of Hawaiian birth from the Secretary of Hawaii ought to make arrangements for their speedy expatriation. This is a duty which every American citizen of Japanese ancestry must perform, forgetting all personal interests and prejudices.

Years ago in Japan it was customary for the bride to leave her home in a white costume, a symbol of mourning.

She drank a toast in water, and vowed that she would never desert her spouse and step again into her parental home. Again the adopted son of a samurai was so intensely loyal to his master that when an emergency arose, he did not hesitate to draw the sword even against his father and relatives. The samurai was willing to sacrifice everything for his master. That's the real spirit of the Japanese. Children of Japanese parents born in Hawaii are adopted sons or brides of America. Their fathers and mothers have no longer any claim over them. They ought to see that their sons and daughters live up to their obligations and do not fail in the performance of their duties.

Today some people doubt the loyalty of citizens of Japanese ancestry. They charge that these citizens hold on to American citizenship with their right hand, and to Japanese citizenship with their left. Which side will they throw overboard should America and Japan declare war against each other? Will they discard their American citizenship or allegiance to Japan? There is nothing unreasonable in this suspicion, for these people look upon citizens of Japanese ancestry as fence-straddlers. Is not this a disgrace to the Japanese race?

In Hawaii ill-feeling against the Japanese was unheard of. But when the Japanese rose almost en masse in opposition against regulation of the Japanese language schools in 1919, and frustrated this Americanization project, the sentiment of the community toward the Japanese in general changed radically. The English-language press for the first time uttered anti-Japanese sentiments. A wide gulf between the American people and the Japanese was created, and the two peoples looked upon each other with mutual suspicion and misunderstanding.

The crux of the trouble lay in the mistaken idea of the Japanese. They constantly harped on their traditional "Yamato Damashi," and endeavored to solve every issue with that spirit. I felt that unless this mistaken idea was wholly eradicated, no amicable solution of any issue could be worked out. I therefore started a territory-wide campaign, emphasizing to the Japanese in most simple and clear-cut ways two ideas:

> (a) Forget the idea "Japanese" and always think and act from the point of view of the American people, as long as you live under the protection of America, and enjoy many privileges.
>
> (b) Inasmuch as your children were born in Hawaii, and expect to live here permanently and work shoulder to shoulder with the American people, you should educate and build them up into good, loyal American citizens. If you do not want your children to live and work in Hawaii; if you prefer them to be educated as Japanese, you should send them back immediately to Japan and have them educated in that country, for, when they grow up, they will become not assets but liabilities to the territory if they remain in Hawaii.

Since the annexation of Hawaii to the United States, I have been urging in my speeches and writings that the Japanese must adapt themselves to the customs and manners of America, that children born in these islands must be educated as loyal American citizens, and that the Japanese must discard all mistaken ideas and have the courage and willingness to go more than half way in settling differences with the American people. The majority of the Japanese misunderstood me. They failed to grasp my ideas, attacked and sneered at me as a traitor, a spy, or "the man with the face of a Japanese but the heart of an American." During the school agitation of 1919, several threatening letters came to me. Naturally I expected strong opposition, and in order to be prepared against bickerings and counter campaigns, I sought the views of leaders in Japan. I went to Japan in July, 1920, and laid my views frankly before Viscount Shibusawa and members of the Japan-America Relations Committee. They promised me their full backing. In my interview with Kei Hara, then Premier of Japan, I talked at some length on the status of the citizens of Japanese ancestry, particularly on the question of expatria-

tion. Premier Hara said in unequivocal manner:

"This is no time for argument. Citizens of Japanese ancestry must speedily cut off their allegiance to Japan, and show their sincerity to America."

Foreign Minister Uchida, the then Foreign Minister, was equally emphatic. He stated that he was in hearty accord with my views and that he would immediately send out instructions to the Consul General in Honolulu. He encouraged me to push on the campaign without any fear, and also promised every possible assistance to speed up expatriation. Receiving these endorsements and promises of assistance, I commenced the campaign in January, 1921.

After five years, in the summer of 1925, I visited Japan again, and met Count Komei Kato, Premier at that time, Foreign Minister Baron Shidehara, and others. They were intensely interested in the results of the campaign. With Interior Minister Baron Wakatsuki, who later became Premier, and who is now the head of the Minseito Party, I had an interesting conversation on expatriation. Citing instances of many parents objecting to expatriation because they felt that it was an act of disloyalty to Japan, I asked the Interior Minister frankly how he felt. Without any hesitation, he replied:

"Our government does not have the least desire to retain, or make any claim on children born in Hawaii or America. Our earnest desire is that they shall grow up into strong, trustworthy American citizens, without any string tied to the old country. Recently when the question of expatriation was discussed in a cabinet meeting, I urged that when a person obtains the certificate establishing his birth in one particular country, his allegiance to Japan cease automatically without any necessity of filing the formal application for expatriation to the Interior Department of the Japanese Government. I wanted to make the expatriation procedure as simple as possible. But a group of officials held that it is better to have the applicant declare his choice and file his application, and I yielded reluctantly. To *expatriate one's self is not an act of disloyalty. It is a duty which every young man must perform to the country of his birth,* and the performance of that duty is earnestly desired by Japan. Go back and tell the Japanese in Hawaii that Wakatsuki said so, and urge them to speed up the expatriation of their children."

Wakatsuki asked that his words be quoted freely in driving home the necessity and importance of expatriation. Later, he called in his staff of officials and gave out instructions such as accepting the application even though the date of birth or name of the applicant in the birth certificate and family registry may be different, simply to lessen the amount of red tape and make the procedure easy and simple.

All the Premiers, Foreign Ministers and Ministers of the Interior as well as the leaders in Japan are united in their sentiment on the question of expatriation. They have all expressed time and again their earnest plea that citizens of Japanese ancestry speedily expatriate themselves and hasten the solution of this issue.

While the Japanese government is so frank and sincere in its attitude, the Japanese in Hawaii are indifferent. Their indifference to the status of citizens of Japanese ancestry and their seemingly deliberate efforts to disrupt the relations of two peoples are far greater acts of disloyalty, which they dread so much. Citizens of Japanese ancestry and their parents ought to think more seriously of this important question.

* * *

Back-To-The-Soil

SOME NINE YEARS AGO when I first stated my views on the Back-to-the-Farm movement, one of my hearers said, "Okamura is a rascal. He wants me to make my son a farmer. I have been a farmer in Japan; I came to Hawaii to continue as a farmer, and it's perfectly all right for me to die a farmer. But make my son a farmer? Not on your life!" And his son said, "I am not going to become a farmer, like my father." These two echoed the prevailing sentiment of the laborers on the plantations in those days.

The parents were determined to see their children receive every possible

American citizens of Japanese ancestry get a good start when their parents are employed by the sugar and pineapple plantations of Hawaii, and by many other lesser employers of labor. Care of the mothers begins before children are born, then baby clinics, kindergartens, public schools, recreation centers, and so on.

education, and stretched their means to the limit in sending them on through higher schools. These children thought that by merely getting hold of a diploma, "white-collar" jobs would be cut out for them, and that they would be able to spend the rest of their life in bliss. It is not strange therefore that my advice should have offended the parents. Even the newspapers and magazines ridiculed and attacked my views.

Today the sentiment has changed immensely. Every man on the street is thinking and talking about the Back-to-the-Farm idea. The pressing question now is how intelligently and advantageously to put the idea into actual operation. Although it has been delayed, we are to be congratulated on this great change.

The 70,000 Hawaiian-born youths growing up in our midst must soon stand upon their own feet, and hew out careers for themselves. Although they all long for white-collar jobs, and are educated for such positions, many will be disappointed, for this territory, or in fact any country on this earth, would be too small to accommodate them. Wherever they go, they will find unemployed men in huge numbers, but will not find such jobs. And just because they cannot find suitable jobs, they should not be idling. As long as they want to live, they must eat. This fact is clearer than daylight, and for that reason I have stated my views frankly.

By all means, we must encourage the education of those who have special talents, but that accounts for only one or two in a hundred. The majority are destined for agricultural pursuits, and they ought to be given proper training for their jobs. When all people in Hawaii become farm-minded and begin to work for it, they will find that there are still plenty of opportunities in the islands. There is room for another 100,000 to 200,000 people.

Back-to-the-Farm does not strictly mean back-to-the-plantation. It does not mean that youths should return only to the sugar or pineapple planta-

Neat family cottages are provided for employees of the sugar and pineapple plantations of Hawaii, where vegetable gardens, flowers, and modern conveniences provide happy and wholesome conditions for Japanese and other employees whose children have all the advantages extended to any young American.

tions, but it does mean that they should return to the soil. Agriculture includes not only raising sugar cane and pineapples, but also corn and potatoes, hogs and poultry, bees and honey and other products that are obtained from the soil. These enterprises, however, require working capital, and if the youths have no capital, they ought to seek the opportunities that sugar and pineapple plantations offer. It is safe to work on the plantations, for there is no danger of starvation.

The ideal plan, it seems to me, would be to obtain a five or six-acre homestead, or some piece of suitable land and go in for independent farming. To finance this, I urge the parents to use their savings in the banks, or sell real estate if they have any in Japan, using the funds to rehabilitate their sons. A farm can then be cultivated by father and son, the father giving his son the benefit of his years of practical experience, and the son learning from magazines or books or getting information from experts. The son can extend his activities into other fields if he so wishes, but always there will be the land to fall back on. In this way, Hawaii will see the gradual formation of a middle class.

Hawaii must be self-supporting in food and labor. We import into Hawaii each year $6,000,000 worth of food that can be raised here. Much of this money would remain in the territory if agriculture assumed its rightful place among our industries. No lettuce that comes here is so good as that raised in the volcano district. There is no reason why Hawaii should not be able to raise as good tomatoes as are grown on the mainland. We all prefer island eggs. Why not supply the demand? They say there is no money in the poultry business because feed costs too much. Why not raise the feed here? Hawaii can and should raise all the food eaten here.

Hawaii's labor supply is being constantly made a political football. If the young people of these islands realize the dignity of labor, and respect agriculture, there would be no need of bringing the labor from without. We can furnish our own labor.

In order to put the Back-to-the-Farm

idea into practice, we must change the ruling sentiment of father and son. There may be valid reasons why the first generation Japanese dislike farming. They came here as contract laborers, worked for comparatively low wages, lived in cheap camps and labored hard. It is natural for them to try to show their sons an easier way to gain a livelihood. It is just as natural for their sons who have seen their parents' experiences to desire something better. But it is a serious mistake to be influenced by such prejudices and dislike agriculture. Agriculture is not a thing to be despised, for it is the foundation and very life of a country. In old Japan the people were divided into four classes: samurai, farmers, artisans and merchants. Without farmers no country can long endure. This is true of every country on this earth. America thinks highly of farming, for her greatness is due to farming. Over three-fourths of the presidents, and a large number of men who are playing important rôles in public life are men from the farmers' families. Just as soon as people understand the value of farming and the dignity of labor, the Back-to-the-Farm idea will be actually put into practice. The improvement of farming or plantation conditions is a secondary matter.

The conditions on the sugar plantations have been greatly improved and are being still further improved. I know what is being done for the men, and I can say it very frankly without any hesitation. For twelve years I have been visiting the sugar plantations in connection with my territory-wide educational campaign among the Japanese. I have met the leaders, time and again, heard their grievances and have worked with them in solving their difficult problems. I believe that the large number of Japanese people who came here and are now so comfortably situated owe everything to the sugar plantations. They may not always have been treated well, but if they had not been assured of steady employment, there would have been no opportunity for them to come here in the first place. The Japanese must never forget that. Similarly the plantations must not forget the contribution of the Japanese, for to these laborers must go a large measure of the credit for the success of the sugar industry in Hawaii. If the plantation and laborer would think of the benefits each has received from the other, and plan to continue this mutually helpful relationship, both would profit, and improvements on the plantations would come as a natural course. Without any reserve I laid my views before the leaders among the laborers, exchanged our frank views and informed the plantation managements of what was said at these meetings. I pointed out to them the need of improvements in the camps and in the treatment of men, and was pleasantly surprised at the quick responses. Within two years most of them have been carried out.

I have time and again suggested better treatment of the young men. A little more consideration ought to be shown to them. Where they are capable of performing the work of a grown man, they ought to be given equally good pay. Instead of being given the same pay year after year, they ought to be encouraged with small increases. I heard of a boy who had to choose between a plantation job at $40 a month and a job as a garage mechanic at $20. He chose the latter job, not only because he disliked work on the plantation, but mainly because he thought that as he became an experienced mechanic, his wages would become higher. Today, the plantations are seriously thinking more and more of the youths in these islands. Gradually they will evolve a better system of placing them on the plantations, and I believe that the matter of wages will be well taken care of.

Japanese in Hawaii*

By C. P. IAUKEA

IT WILL BE RECALLED that on January twentieth, 1881, King Kalakaua set out on a tour of the world, accompanied by his Chamberlain, Col. C. H. Judd, and Hon. W. G. Armstrong, Commissioner of Immigration.

One of the main objects of the journey was to investigate the whole subject of immigration and ascertain to what extent foreign governments would coöperate in a plan of repopulation as would coincide with the wishes of the Hawaiian nation, and at the same time meet the demands of the planting interests in the way of labor.

Going by way of San Francisco, where the King was given a warm welcome, he proceeded to Japan and was there received with all the honors and distinctions befitting his rank and station as the Head of a friendly State.

This manifestation of good will and friendship on the part of His Japanese Imperial Majesty and his Government toward King Kalakaua, found response and expression in the sending of a special mission to Japan in 1882, following the King's return from his world tour; the Hon. J. U. Kapena heading the mission.

A little later, towards the close of 1883 and whilst in India on the East Indian Immigration, I was commissioned Envoy Extraordinary and Minister Plenipotentiary to the Court of Japan, where I proceeded upon the completion of the Indian mission.

I arrived at Tokyo on April 10, 1884, where I was met by an attaché of the Foreign Office and escorted to a place known as the "Roku Mekan," which the Japanese Government had provided for the Hawaiian Legation. A few days later by appointment, Prince Nabeshima, Grand Master of Ceremonies, called at the Legation to escort me to the Imperial Palace for an audience with the Emperor.

His Imperial Majesty Mutsuhito received me most graciously, welcoming me as the Envoy of a friendly nation and expressing the hope that my stay in Tokyo would be a pleasant one and my mission attended with satisfactory result. After responding with a brief address and a quarter of an hour's pleasant conversation, I took my leave well pleased with the reception accorded me by the Emperor and court officials, some of whom I had met at the coronation of the Russian Czar and Czarina in Moscow in May of the year previous, the most distinguished being Prince Ito, Ambassador Extraordinary for Japan at the coronation.

On my first interview with the Foreign Minister, Count Kaoru Inouye, who offered me every facility, I presented a communication embodying the proposal of the Hawaiian Government regarding the immigration convention. This was on April 14, the fourth day after my arrival. With prompt consideration I was granted a second interview a few days later at which His Excellency stated very frankly the attitude of his country in the matter, pointing out the reasons why Japan could not very well enter into a compact such as proposed until the revision of existing treaties with the Western Powers, then under consideration, had been concluded and disposed of.

His Excellency assured me, however, that the proposal as outlined was far from objectionable, and as soon as the present complications were cleared up, the proposition of a labor connection

* A talk before the Pan-Pacific Club of Honolulu, February 11, 1935, on the occasion of the Fiftieth Anniversary of the arrival of Japanese in Hawaii and establishment of trade relations.

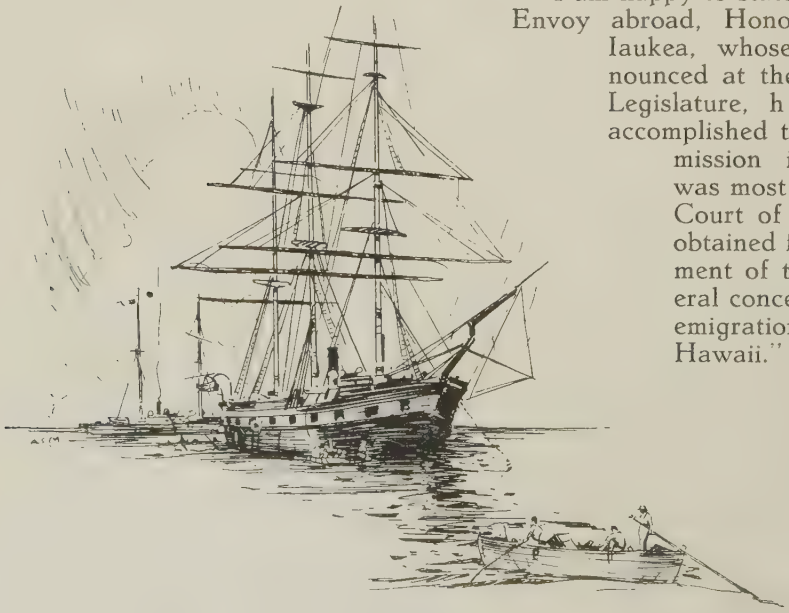
between Hawaii and Japan would be taken in earnest. This concluded the negotiations and I prepared to leave for home.

In the meantime, however, there were official entertainments that required my presence, ending with a garden party and fête given by the Emperor and Empress in the grounds of the Imperial Palace, where the élite of Tokyo, both foreign and local, were present. A "Cherry Blossom" fête as I recall it at the coming into full bloom of the cherry trees, so redolent and abounding in the Land of the "Rising Sun" as to form one of the chief attractions of Japan to tourists and visitors. It was a gorgeous sight made resplendent by the colorful garments worn by the ladies of the Court and attending officials, all in their native costume. One not to be easily forgotten.

On the day before I was leaving, I had the distinguished honor of being made a Grand Officer (next grade to the highest) of the Order of the Rising Sun, conferred upon me by the Emperor. An Order instituted and founded by Emperor Mutsuhito some sixty years before, April 10, 1875. An honor and distinction I prize highly, and as it so happens, the only Hawaiian living privileged to wear this coveted Cross and Insignia. And which, if it is not considered presumptuous of me to say, I hope to wear on some occasion commemorative of the fiftieth anniversary of the first landing of Japanese immigrant laborers in Hawaii, February 17, 1885. An event of no little significance, and one which the Japanese community throughout the Islands may well take first pride in celebrating.

In conclusion, I am glad to state that subsequent events showed that my mission to Japan on the Labor Convention was more successful than I had anticipated. For on my return, accompanied by Hawaii's consular representative resident in Japan, Mr. R. W. Irwin, whom I had induced to come to Hawaii to confer with the Home Government and pick up the threads where I had left off, more particularly as to the means of transportation and cost thereof, and the care and supervision of emigrants after arrival, I was pleased to find that the Home Government had received advices of such a nature as to justify His Majesty in announcing to the Legislature of 1884 on the day of prorogation, that my mission had resulted successfully, in the following words:

"I am happy to state that my Special Envoy abroad, Honorable Curtis P. Iaukea, whose mission I announced at the opening of the Legislature, has satisfactorily accomplished the object of that mission in Europe, and was most successful at the Court of Japan in having obtained from the Government of the Empire a liberal concession to promote emigration from Japan to Hawaii."



Fifty Years After*

By MASAJI MARUMOTO

President, Hawaiian Japanese Civic Association

IN THE YEAR 1868 a group of 148 laborers came to Hawaii from Japan. Of that group there is but one survivor living in Hawaii today. At the ripe old age of 102 he is now spending the twilight of his life in the shadows of Iao Valley on Maui. The arrival of that group of laborers in 1868 is important historically as a prologue to a movement which really began seventeen years later, in the year 1885, a movement which was to make the Japanese racial strain numerically the predominant element in the population of Hawaii by the turn of the century.

On February 8, 1885, a group of about 900 laborers arrived in Honolulu from Japan on the *City of Tokio,* to be followed four months later by another group of about 900 laborers who came on June 17, 1885, on the *Yamashiro Maru.* On the coming Sunday, Japanese in Honolulu and in other communities in Hawaii will appropriately observe the golden jubilee of the arrival of these pioneer groups of Japanese laborers by honoring the survivors of those groups and by recounting the achievements of the Japanese people here during the past fifty years.

Compared to the giant strides taken by the peoples of the world, and especially the peoples of the United States and Japan, during the past half a century, we cannot be over-enthusiastic about the record of achievements left by the Japanese people in Hawaii during the years since 1885. But I believe that due credit must be given to what has been accomplished by the pioneers of the Japanese race in Hawaii, considering the limitations and the difficulties under which they labored. They came to Hawaii with very little educational background and no capital. Their predominant trait was their will to work, although we must also credit them with initiative, for without initiative they would not have been able to cast themselves adrift from ancient moorings to seek their fortune in a foreign land which to them was unknown except in name. With their will to work they contributed in no small measure to the economic development of Hawaii.

Half a century ago the nascent sugar industry in Hawaii had the necessary capital and it had a group of enterprising men who furnished the necessary management for its development. But it lacked labor. Attempts were made to import labor from Europe and the South Seas without satisfactory results. The influx of laborers from Japan solved this difficult labor problem. Thus far in the history of capitalism the return to labor has been relatively small compared to the returns to capital and management. Consequently in some quarters an impression exists that labor is not of the same dignity as capital or management. But labor is just as indispensable as capital and management for economic development in any community. Thus, these pioneers of the Japanese race in Hawaii played an important part in the rise and growth of the chief industry of Hawaii.

But, in retrospect, from this vantage point of fifty years after the arrival of the first group of Japanese laborers to Hawaii, we discover that the Japanese people have failed to take full advantage of the economic opportunities that were open to them during their early years in Hawaii. By some people, their

* A talk before the Pan-Pacific Club of Honolulu, February 11, 1935, on the occasion of the Fiftieth Anniversary of the arrival of Japanese in Hawaii and establishment of trade relations.

failure to have a sounder economic foundation than that which they actually possess today has been attributed to the fact that they were late comers; that they came to Hawaii later than the Portuguese and the Chinese. But their failure, I believe, was due to the fact that they were not immigrants in the true sense of that term. In Anglo-American law, there is a technical term known as domicile. One's domicile is where one in fact has his permanent home and where one intends to make his permanent home. I take it that an immigrant is one who relinquishes his native domicile, with the intention of making his permanent home, and thus acquiring a domicile, in the land to which he is bound.

When the Japanese people left their native land for Hawaii they had no intention of making Hawaii their permanent home. They were birds of passage seeking temporary shelter and food in a foreign land and intending to earn the wherewithal for a life of ease later in the land of their birth. The homing instinct was unusually strong in them. Thus they did not make permanent investments in Hawaii and they were not guided by long-range objectives. During recent years, with the growth of their children born in Hawaii, and the passing away of their parents and close relatives in Japan, they have very largely abandoned their hope of returning to Japan and have decided to make Hawaii their permanent home. Thus by force of circumstances they have been transformed into true immigrants. But the transformation came too late for them to avail themselves to the fullest extent of the opportunities that were theirs for the asking. If the Japanese people in Hawaii had realized a little earlier their inevitable fate, they would be more soundly established and the economic picture of Hawaii today would be somewhat different. However, if one be enterprising there are opportunities, and the Japanese people in Hawaii have in recent years been taking long strides to recover lost ground. Their advancement in various business undertakings during recent years is especially noteworthy.

The transformation of the Japanese people in Hawaii from the status of transients to that of immigrants or permanent residents is a welcome development not only to the Japanese people themselves but to the welfare of Hawaii. A transient will have little interest in the community in which he lives. A permanent resident would necessarily take a great interest in community affairs and would educate his children to fit into the conditions and mores of his community. He would identify his welfare with the welfare of his community.

We of the younger generation, with but a few exceptions, are necessarily committed to seek our livelihood in Hawaii. On this golden jubilee of Japanese immigration to Hawaii, we look back upon a trail of fifty years left by our predecessors and learn a lesson from the past, the lesson that one's own welfare is advanced by identifying it with the welfare of the community in which he earns his living, that opportunities are lost by vacillation as to future courses, and our economic foundation can be established only by planning with a long-time objective in view. Thanks to the sweat and labor of our predecessors, we have been amply equipped with education and necessities for our struggle for livelihood. A few adventurous souls may seek their fortune elsewhere. But to most of us this is our native land and we can chart our course accordingly. We hear no siren beckon from a distant land. Thus provided with better advantages, both mental and material, than our predecessors, we look to the future. And it is our hope that fifty years after, in retrospect, we can point with pride to our achievements and contributions to community advancement.

Sr. Gregorio Nieva

Popular in the Philippines

Pan-Pacific Union and the work of Alexander Hume Ford highly praised; comment on importance of his successor

By GREGORIO NIEVA

Secretary, Pan-Pacific Association, Manila, P. I.

IT was with astonishment that we here read the sudden announcement of Mr. Ford's retirement, first, in a letter he sent me together with a clipping of the *Japan Advertiser* carrying it, and then in the Pan-Pacific Union Bulletin issue for last October-December.

I also read the *Honolulu Advertiser's* editorial on said retirement, each and every word of which I heartily endorse.

Mr. Ford's achievement in creating a very prominent place for Hawaii in the Pacific, and an undeniable environment of friendship among the countries of the Pacific, chiefly Japan, China, and the Philippines, Siam, etc., on this side, and Canada, North and South America, and Australia and New Zealand on the other side, is indeed beyond proper appreciation today and will the better be realized later.

Who is next to "shoulder the burden," to enable him to put his papers in order during the "closing years" of his life, is rather pathetic and a most difficult question to answer.

His enthusiasm and devotion to the Cause are simply peerless. It would require a great man to shoulder and a great country to sponsor, plus adequate funds behind.

This, on the one hand.

On the other, it would be a pity to allow it to dwindle.

And I am afraid it might without a man like Mr. Ford.

I have suggested to him to come upon the inauguration of our Commonwealth, so that he may take charge of the next Balboa Day, when Senate President Quezon is already at the Executive Mansion as our first Governor-General or President of the Commonwealth. Then the next Balboa Day would be more fittingly observed for the first time under the Philippine Government, for three reasons: (1) the pleasant recollections it evokes of Spain; (2) the inauguration of our Commonwealth; and (3) Senate President Quezon's belief in the possibilities of the Pan-Pacific Union.

With President Quezon sponsoring it in the Philippines, the Philippines would be more active in Pan-Pacific matters.

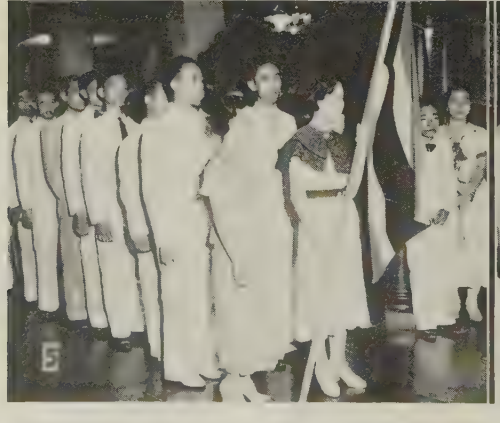
Pan-Pacific Youth

In July of last year, at the request of Mr. Ray Cromwell, Chairman of the World Council of Youth, for the Pan-Pacific Association of the Philippines to send a representative of the youth of the country to the Pacific Area Student Conference that was held in Shanghai last August, Mr. Teodoro Evangelista was recommended by me for appointment by President Quezon, Honorary Vice-President of the Association, as an envoy of the Philippine Youth to said Student Conference. And Presi-

dent Quezon not only enthusiastically appointed him, but generously gave the necessary funds to defray all transportation and hotel expenses involved, for the Association had no available funds at the time. Mr. Evangelista was thus enabled fittingly to attend the conference.

In appointing Mr. Evangelista, President Quezon in part said: "The Pan-Pacific Association is greatly interested in placing the youth of the country in friendly, educational contact with that of other Pacific area countries, and nothing could be more greatly instru-

Governor General Frank Murphy receiving the flags of various nations of the Pacific on the occasion of the Pan-Pacific Balboa Day celebration at Manila September 25, 1934. (1) United States of America; (2) Spanish and Latin-Americans; (3) Chinese; (4) Australia, New Zealand and Canada; (5) Siamese; (6) Japan. Note directly above the head of the beautiful Japanese girl presenting the flag the benign countenance of Alexander Hume Ford, father of the Pan-Pacific Union and of the Balboa Day idea.



mental in the promotion of enduring friendship among said countries than the educational contact of our youth with theirs. It is for this reason that, in your selection, we are sending to said conference one we are confident will be a real credit in the achievement of its purpose, and one who is an outstanding leader of our youth."

Upon his return to our country, Mr. Evangelista brought with him such new ideas about world youth activities as he personally saw and participated in, and such inspiration from actual contact with world youth as had made him realize, in a practical way, how the youth of other countries are being reared by their respective governments and peoples, and what chances were thus opened to our own youth to enjoy recognition and coöperate in the study of Pacific Area problems.

It was then with confident gratification that I took this as a challenge of the World Youth for our own Youth to assume its rôle in this World Youth movement, and the better to realize that we are not living in isolation in this beloved country of ours, or in this vast Pacific Ocean, but that our youth have presently a place and a duty to perform in and for the Pacific Community, as well as in the consideration and solution of Pacific Area problems.

If but for this, the Youth of the country should all join the movement, there to speak their mind out, for the Pacific community at least.

Community work among nations is, indeed, the call of the hour, for no longer can any country be self-sufficient and live in perfect isolation from its neighbors. But we must be duly prepared to make a creditable, constructive contribution to this movement, and be thoroughly minded of it. And it is our share in this growing Pacific community interest, and new feeling and sense of Pacific duty, that to my mind constitute today the challenge to the youth of the country, *that it look forward in a true spirit of open coöperation with the youth of other countries, and of joint leadership in bringing about better understanding and mutually satisfactory solution of Pacific Area problems.*

I hope I can say now that the challenge is accepted, and that international-mindedness is thus properly started and fostered in the Philippines.

In this talk I refer particularly to the youth of the country that is being reared in an intellectual environment, for it is that youth that we have to rely upon for the promotion of ideals and leadership, it is this environment that focuses our vision and pinches our feelings for action, towards legitimate ambitions, through enlightenment from that higher education that enables us qualifiedly to grasp the reins of that powerful leadership that removes barriers, moves and pushes peoples and nations towards success.

Civilization is drifting, forcefully drifting from Europe and both Americas towards the Pacific, and this emphasizes our Pacific position—driving away all the debris of old, and making clear the way for the new and for the revigoration of the weakened. But that drifting is not self-moving, it is propelled by the tremendous moral power of those few we call leaders, whose minds' brilliant scintillation furnishes the guidance and sets whole communities and nations amoving.

But, aside from this, a newer drift is looming for us all in the Pacific, to put racial consistencies to a very hard test, with the United States, England and Japan as its chief factors, with Russia, China and the rest of the minor powers in the Orient to be dragged along.

Of course, this is not yet a problem for the World Youth to engage itself in. But it is a good thing for them to find themselves right on the threshold of our huge ocean whereon this supreme event of events, if ever to happen, may take place. Just the same, however, it will be their own problem tomorrow.

It is for this reason that these World Youth area conferences should heartily be patronized by our statesmen, for they would furnish our own youth the best of chances to qualify themselves to

participate in the great work that is coming, to make world problems closely and frankly linked together for all countries of the world, and to create the imperative necessity for all that can to contribute to the mutually satisfactory solution of said problems, with selfishness eventually to become in a way subordinated to world welfare.

These conferences, in affording the World Youth all due opportunity to know each other better, would in the end bring about a just evaluation of the requirements of each community, as well as a compelling realization of the New Deal for the World Society, for which preparation of World Youth would be a gradual relief to mankind. That, indeed, would be factual fostering of international-mindedness.

Ambitions will continue to surge, but constructive attitudes may eventually substitute for destructive ones, as more profitable and less expensive for all.

But, as I have said above, this will require contributing leadership on our part, and it is from you, the Youth of our country, that such leadership shall come.

Have we the leader for it? Of course, I should say.

Mussolini, Hitler, Roosevelt are today the towering instances of constructive, national leadership abroad. Their work, however, is at present chiefly confined to the boundaries of their respective countries, the main idea of which is the assurance of a safeguard against intrusions from without.

Aguinaldo successfully led our Revolution to a relatively complete materialization.

Quezon is leading our strife for the safe sailing of our Commonwealth, as an intermediate step to our second Republic.

Stalin, as the successor of Lenin, in shaping a new life for his people, is perhaps the only one trying to go beyond the boundaries of his own country, to exert his influence in the shaping too of the life of other peoples—as to the propriety or impropriety of which I would rather say nothing.

We have been heretofore charged with the dictum of being mere imitators, mere copyists, and poor ones at that.

This, I refuse to admit—we have been just forced to be by circumstances.

To my mind, I would vote all the time for our own in our own life, and for the culture of our own moral and social values, and for our own leaders —otherwise our own would disappear —for we are not lacking of them, and ours are as good for ourselves as others are for their respective peoples. And I would flatly reject harmful, exotic influences that should have no room in our daily family and state life, that would only place us under foreign dependency again, of which we have had enough.

But I am looking forward to that day when there will be an association of world leaders, openly and jointly working even for a relative world welfare, without any undue intrusions for any one people from without, and I should say again it is from you, Youth of the country, that the advent of such leaders of ours must be expected.

This is the challenge you have before you, young men of the Philippines, to have in mind the fact that we are living in an international community in the Pacific, that you may accordingly develop your own possibilities, and prepare yourselves to coöperate and lead in the solution, not only of our own, but also in that of World youth, problems. I feel positive you will honorably meet the challenge.

Youth of the Country, in closing, let me assure you of the sincere coöperation of the Pan-Pacific Association of the Philippines in carrying on this undertaking, and you will do better by joining the Association en masse, so that we may form a Youth Chapter of the Association, and that when, next July, the representatives of the World Youth come for the next Pacific Area Student Conference in our city, they may meet you all and have a better idea and personal cultural contact and knowledge of the Country's Youth.

China Trade Celebration in Hawaii

By EDNA B. LAWSON

SPEECHES, a program and a banquet in the ballroom of the Royal Hawaiian hotel in Hawaii ended the week's activity celebrating 150 years of friendship between the United States and China. Several hundred persons attended the banquet, including Governor Poindexter, and other high dignitaries of the Territory.

The address of the evening was given by Riley H. Allen who spoke on "Two Peoples—And Hawaii's Part."

"We are celebrating an occasion memorable alike to the United States and China," he said. "This is of special significance to Hawaii, for Hawaii has had a powerful influence in moulding the link of friendship which is a strong bond between two republics.

"One hundred and fifty years have passed since the Yankee skipper sailed the little bark *Empress of Asia* from New York around the Horn and up to the China coast. She carried a bare 30 tons of cargo—this was the first time the American flag floated over a merchantman in the China seas. Thus did the new republic seek by friendly commerce to establish relations with the people whose civilization dated back to five thousand years before Christ.

"Captain Samuel Shaw, skipper, had been an officer in the Revolutionary war, and the date of his voyage to China, January 28, 1784, marks the period of contact and friendship between Hawaii and China. Captain Shaw left among the Canton merchants a reputation for fair play, for courtesy and for a sincere, unassuming comradery which was the first foundation stone in a great trade and the first cementing bond in an enduring friendship.

"The date 1784 is a marked one. It was less than a year after peace had been formally signed between Great Britain and the young United States. It was six years after Captain James Cook had discovered Hawaii. It was also the decade in which the first known Chinese came to Hawaii.

"There is no authentic record when the first Chinese landed in Hawaii. It is entirely probable that Chinese fishermen, in their little boats blown by inclement winds, had reached the islands. Captain Cook when he landed in 1778 saw no Chinese, but early in the next decade they were here.

"In 1789, a Captain Metcalf, a China trader, sailed from Macao, China, for Hawaii, as master of the little schooner *Eleanor,* upon which were two Americans and 45 Chinese. This schooner, seeking fresh water, vegetables and fruit, called at Hawaii and Maui. According to the best records some of these 45 Chinese were left in the Islands. Explorer Vancouver in 1794 found at least one Chinese in Hawaii.

"Hawaii first figured in authentic records as an important link in the commerce between the North American continent and China in 1785. 'King George's Bound Company' was founded by London traders. They purposed to collect furs from America and barter them for tea and other Chinese exports. From this early date until annexation in 1898 there was a ceaseless incoming of Chinese to Hawaii.

"The first Chinese to come," said the speaker, "were sailors, on ships of various flags. Next came the traders seeking sandal-wood and feathers, exchanging for tea, hemp, silks and dried foods. Soon came merchant adventurers, making visits of state. Humble peasants came from the close-tilled lands of Kwantung. So, early in the 19th century the Chinese farmer was beginning to labor in the fields and swamps around Honolulu, Lahaina, Hilo, Kona, Hanalei.

"Out of China came the first sugar mill to appear in Hawaii. Previously the cane had been pounded by hand. In 1802, from Kwantung province came a crude stone mill. The enterprise failed, for Lanai lacked water. Thirty-two years later another sugar enterprise was set up on the island of Kauai and the sugar industry was born. In 1819 at Wailuku, Maui, Chinese made sugar and molasses with the aid of copper kettle and stone mallets or beaters. Hung Tai set up a sugar mill here, a failure, but the first sugar mill to operate in the islands.

"Thus was formed from these crude beginnings the Hawaiian Agricultural Society which later grew into the Hawaiian Sugar Planters' Association. The first of imported Chinese labor groups arrived in 1852. The annexation ended immigration. The Chinese Exclusion Law of the United States, passed because of anti-Chinese riots and agitation in the Pacific coast states, applied to Hawaii the moment the American flag went up here.

"The Chinese," continued the speaker, "play an important part in Hawaii. From their humble beginnings they have become a commercial and social element of high place and permanent importance. Hawaii has contributed to the China of today. Here the immortal Dr. Sun Yet-sen absorbed the principles of popular government and laid the basis for his great work of revolution and democratization. Young men have gone from here into the new China to aid in its government and industry. They are the guarantors and the strongest possible factors of a continuance of friendly relations."

Hawaii's Youth

By JOHN AKAU
Hawaii Committee, World Council of Youth

RICHARD FUJII, University of Hawaii student oratorical contest winner last school season, offered stimulating comments on "Youth and Hawaii." He said, "Youth has come to the fore in world events. Youth has set out to mend the blunders of its fathers, to usher the world out of a vicious circle of economic and political instability . . . That there is in America a small and articulate minority of young people truly interested in the political and social currents cannot be denied, but it is so small a minority!

"Not only on the mainland, but in Hawaii, too, the majority of the young people are unaware of the waves of thought which now sweep other nations of the earth. To be told that Hawaii's youth lives unconscious of the motivating sources of present events (unemployment, vice, filth, disease, poverty, ignorance, war insanity, etc.) is discouraging. Still, where are the manifestations of the genuine interest in national and international affairs, that our youth may not be accused of leading a mole-like existence, of burrowing in the dark when there is still a world of light and activity to be had for the mere taking?

"I would suggest that Hawaii's youth resist every attempt to limit the education of coming generations. Upon us young people depends the fulfilment of these and other trusts, problems bequeathed us by our fathers, and problems which will arise in our own days. As shapers of the destinies of nations, the least that we can do now is to become acquainted with the nature of today's problems in preparation for that day when we must tackle those problems alone.

"We must think; we must be conscious of our world, and of our capabilities. When the youth of Hawaii is more aware of itself and of the molding forces of its environment, there will result a better and a worthier Hawaii; betterment of existing conditions in the Pacific area."

Aims and Objects of the Pan-Pacific Union

THE PAN-PACIFIC UNION is a non-profit educational institution incorporated (1917) under the laws of the Territory of Hawaii. Not officially affiliated with any government, it enjoys the good will of all in advancement of mutual understanding between peoples of the great nations bordering upon the Pacific Ocean where dwell more than half the world's population.

Aims and objects of the Pan-Pacific Union are:

1. To bring together from time to time, in friendly conference, leaders in all lines of thought and action in the Pacific area, that they may become better acquainted; to assist in pointing them toward cooperative effort for the advancement of common interests.

2. To bring together ethical leaders from every Pacific land who will meet for the study of problems of fair dealing and ways to advance international justice in the Pacific area.

3. To bring together from time to time scientific and other leaders from Pacific lands who will present the great Pan-Pacific scientific problems, including those of race and population.

4. To follow out recommendations of scientific and other leaders for encouragement of scientific research of value to Pacific peoples; to aid in establishment of research institutions where need seems to exist.

5. To secure and collate accurate information concerning the material resources of Pacific lands; to study the ideas and opinions that mould public opinion among the peoples of the several Pacific races, and to bring together men and women who can discuss these in a spirit of fairness that they may point out a true course of justice in dealing with them internationally.

6. To bring together in round-table discussion in every Pacific land those of all races resident therein who desire better understanding and cooperative effort among the peoples and races of the Pacific for their common advancement, material and spiritual.

7. To bring all peoples of the Pacific into closer friendly commercial contact and relationship. To aid and assist them better to understand one another and, through them, spread abroad a friendly spirit of interracial cooperation.

Membership in the Pan-Pacific Union

MEMBERSHIP in the Pan-Pacific Union is open to men and women, not only of Pacific countries, but to all who are interested in Pan-Pacific scientific research, information on current and historical development of the Pacific area, and in the promotion of mutual understanding and harmony among Pacific peoples in relation to the interests of peoples throughout the world.

CLASSES OF MEMBERSHIP: Membership comprises Resident Members (i.e., resident in the City and County of Honolulu), Non-resident Members (i.e., outside the City and County of Honolulu), and Sustaining Members (i.e., resident anywhere in the world or in the City and County of Honolulu).

MEMBERSHIP FEES: (There is no entrance fee.)

RESIDENT MEMBERS, annual, $7.00. Life membership, $200.00.

NON-RESIDENT MEMBERS, annual, $3.50. Life membership, $100.00.

(Continued on Next Page)

YOUR IDENTIFICATION

with the magnificent march of events in the vast Pacific area, now definitely the theatre of human progress without precedent in history, can be signified in a manner highly satisfactory to yourself and gratifying to all peoples of Pacific countries by joining the Pan-Pacific Union. Incorporated in Hawaii in 1917, this beneficent organization has made a splendid record of achievement in bringing together in the name of education, science, commerce, industry and sociology the peoples of the Pacific, thereby promoting mutual understanding and international good will. Your membership will add to its usefulness and glory. (See next page.)

SUSTAINING MEMBERS, annual, $10.00. Life membership, $300.00.

PRIVILEGES: (All memberships include subscription to the MID-PACIFIC MAGAZINE.

RESIDENT MEMBERS: Use of the Pan-Pacific Research Institution, Honolulu, which offers pleasant and economical living quarters when available; lecture hall and equipment; library; reading and work room; a forwarding address for all correspondence, and all available services of the Pan-Pacific Union staff.

NON-RESIDENT MEMBERS: Identification by official membership card which entitles the holder to the courtesies and facilities of Pan-Pacific Union headquarters in Honolulu and of all affiliated Pan-Pacific associations through Pacific countries. (NOTE: Residents of the City and County of Honolulu can, if they wish, take the status of non-resident members.)

SUSTAINING MEMBERS: Whether resident or non-resident, sustaining members are entitled to all privileges within the scope of the Pan-Pacific Union and to recognition by affiliated Pan-Pacific associations and clubs throughout Pacific countries.

AFFILIATED ASSOCIATIONS AND CLUBS: Certain Pan-Pacific associations and clubs impose their local membership fees according to their individual requirements.

THE MID-PACIFIC MAGAZINE, official publication of the Pan-Pacific Union, is published to further its purposes and for the satisfaction and entertainment of its members. Supported by memberships in the Pan-Pacific Union and by patrons of its advertising pages, all receipts are invested in the magazine itself or in projects directly affecting the work of the Pan-Pacific Union. Membership in any classification includes subscription to the MID-PACIFIC MAGAZINE, mailed to any address in the world.

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I hereby apply for { Resident / Non-Resident / Sustaining } membership in the PAN-PACIFIC UNION, and enclose

cheque for $..... in payment of fees for { .....years / .....life } including subscription to the MID-PACIFIC MAGAZINE. (Fees: Resident, annual $7.00; Life, $200.00. Non-resident, annual $3.50; Life $100.00. Sustaining, annual $10.00; Life $300.00.)

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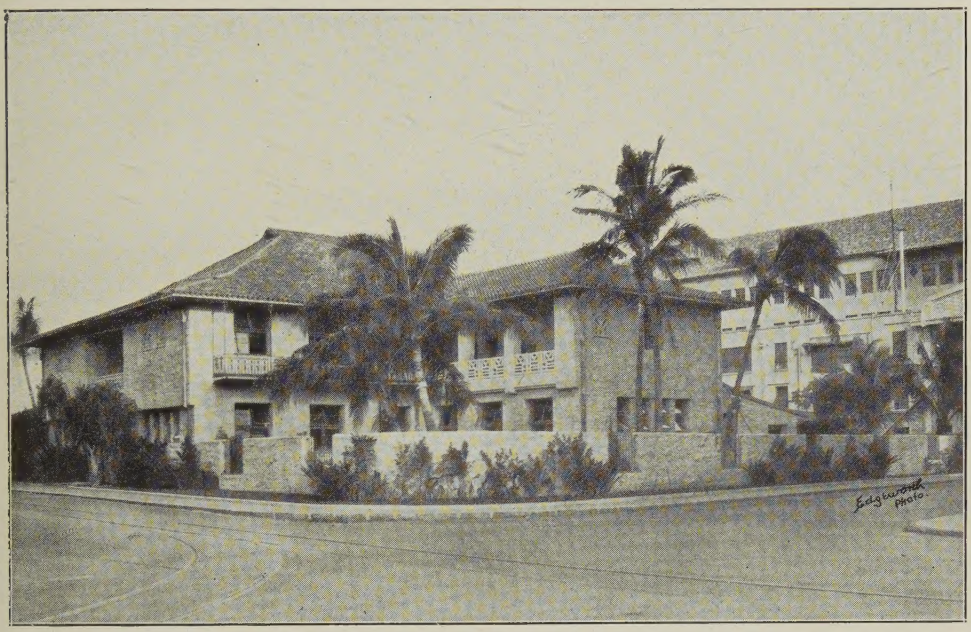

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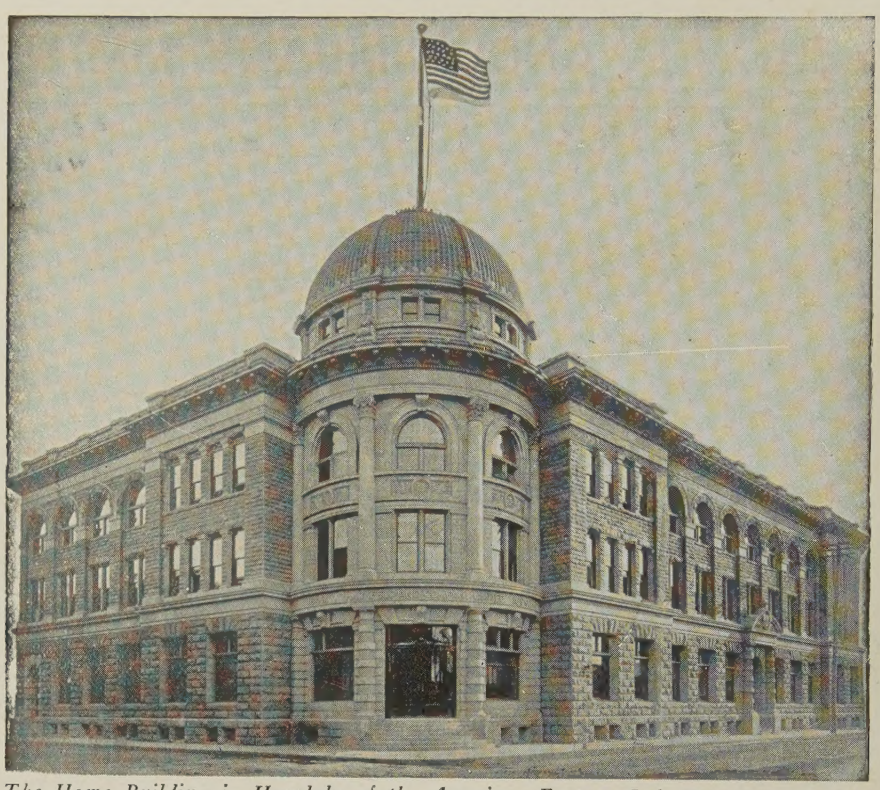
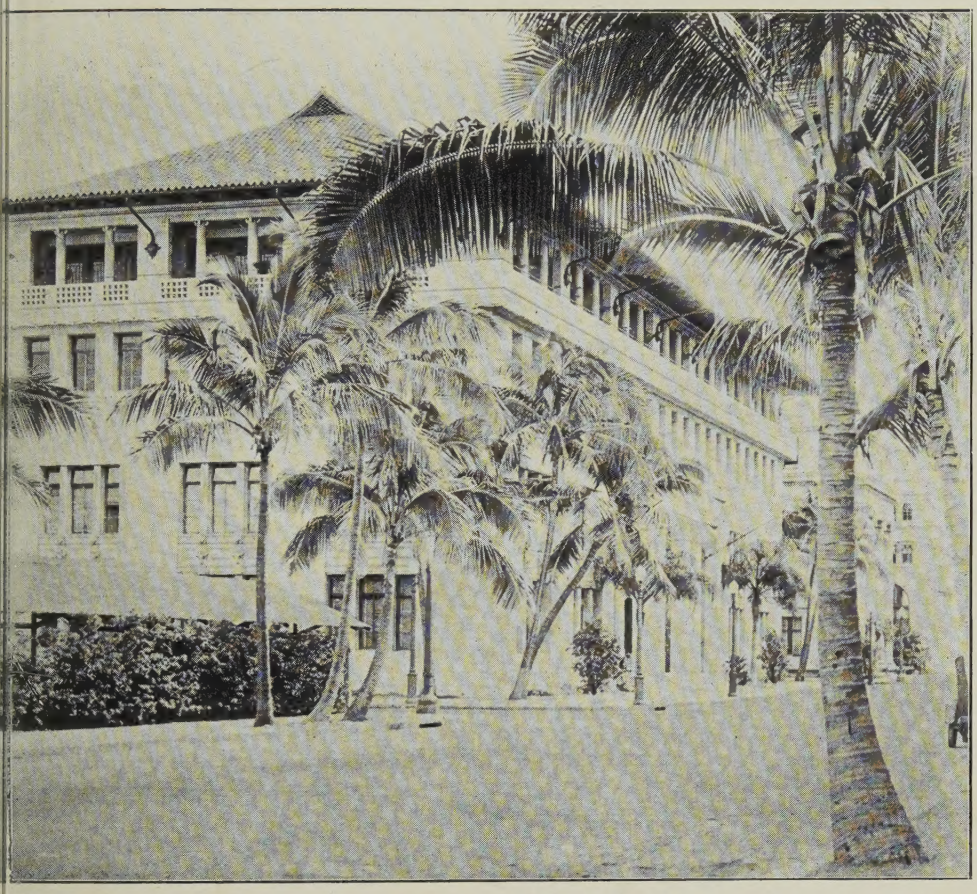


The Home Building in Honolulu of the American Factors, Ltd., Plantation Agents and Wholesale Merchants

Tasseled sugar cane almost ready for the cutting and crushing at the mills.



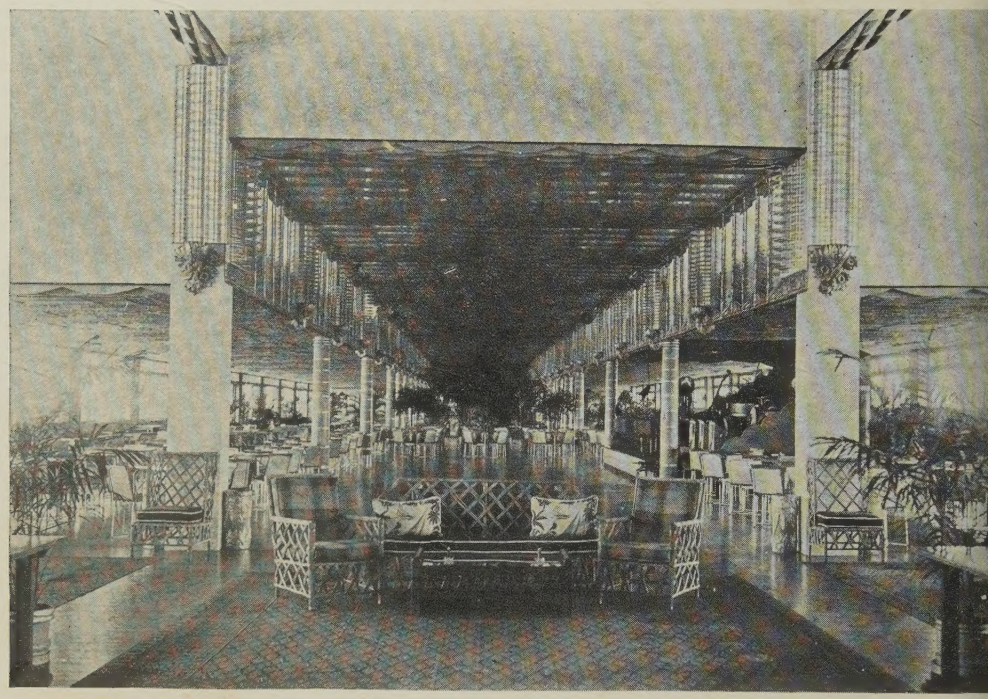
Home of Alexander & Baldwin, Ltd.

Anyone who has ever visited the Hawaiian Islands can testify to the usefulness of the "A & B Steamer Calendars" which are to be seen on the walls of practically every office and home in Hawaii. The issuing of and the free distribution of these calendars is a distinct public service rendered for some 30 years by Alexander & Baldwin, Ltd., who are staunch supporters of all movements that work for the good of Hawaii.

The beautiful new office building pictured above was erected recently as a monument to the memory of H. P. Baldwin and S. Alexander, the founders of the firm and pioneers in the sugar business.

Alexander & Baldwin, Ltd., are agents for some of the largest sugar plantations on the Islands; namely, Hawaiian Commercial & Sugar Co., Ltd.; Hawaiian Sugar Co.; Kahuku Plantation Company; Maui Agricultural Company, Ltd.; McBryde Sugar Company, Ltd.; Laie Plantation; and also Kauai Pineapple Co., Ltd.; Baldwin Packers, Ltd.; The Matson Navigation Co. at Port Allen, Kahului, Seattle and Portland; and the following-named and well-known insurance companies: Union Insurance Society of Canton, Ltd.; The Home Insurance Company, New York; Springfield Fire & Marine Insurance Co.; New Zealand Insurance Company, Limited; The Commonwealth Insurance Company; Newark Fire Insurance Company; American Alliance Insurance Association; Queensland Insurance Co., Ltd.; Globe Indemnity Company of New York; Switzerland General Insurance Co., Ltd.; St. Paul Fire and Marine Ins. Co.

The officers of Alexander & Baldwin, Ltd., are: W. M. Alexander, Chairman Board of Directors; J. Waterhouse, President; H. A. Baldwin, Vice-President; C. R. Hemenway, Vice-President; J. P. Cooke, Treasurer; D. L. Oleson, Secretary; J. F. Morgan, Asst. Treasurer; J. W. Speyer, Asst. Treasurer.



The new roof garden of the Alexander Young Hotel, Honolulu, where gay parties come to dance at the cocktail hour (4 to 6 p. m.) or come later for dinner and dancing (8 p. m. to 12:30 a. m.)

Honolulu's Centrally Located Hotel

Within easy strolling distance of all the most interesting shops, theaters, banks and business

EXPERIENCED TRAVELLERS always stop at the Young in Honolulu. They like the excellent food, superb service and faciilties for entertaining small or large parties. They like the new roof garden which overlooks Honolulu and commands wonderful views of harbor, city and mountains. They like to dance to the music of a mainland orchestra.

Best of all, they like to stay at the Young because for business or pleasure, they will be in the center of activities in a thoroughly first-class hotel.

Alexander Young Hotel

EUROPEAN PLAN

Bishop Street, Honolulu, Hawaii

Single rooms without bath, $2.00 Single rooms with bath, $2.50 up